1962

QUEENSLAND

ANNUAL REPORT

OF THE

HEALTH AND MEDICAL SERVICES

OF THE

STATE OF QUEENSLAND

FOR THE

YEAR 1961-62

PRESENTED TO PARLIAMENT BY COMMAND

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ANNUAL REPORT OF THE DIRECTOR-GENERAL OF HEALTH AND MEDICAL SERVICES 1961-62

The Honourable the Minister for Health and Home Affairs

SIR,—I have the honour to submit for your information the Annual Report of the Health and Medical Services Branch of the Department of Health and Home Affairs for the year ended 30th June, 1962.

ABRAHAM FRYBERG,
M.B., B.S. (Melb.), D.P.H., D.T.M. (Syd.),
Director-General of Health and Medical Services.

INTRODUCTORY REMARKS

STAFF

Mr. K. A. Stevens, B.Sc., was appointed Radiation Health Physicist, and Inspector for the purposes of *"The Radioactive Substances Act of* 1958." Mr. Stevens had been physicist at the University of Queensland and part-time physicist to the Queensland Radium Institute.

Dr. M. H. Gabriel, Health Officer, was granted leave of absence to undertake a course of study for the Diploma of Public Health at the University of Sydney.

VITAL STATISTICS

It is interesting to note the shift in the proportion of the age groups comprising the population. In 1911 the under 15 years age group comprised 33 per cent. of the population; the 15-64 years age group comprised 63·3 per cent.; and the over 65 years 3·7 per cent. In 1961 these percentages were 31·4 per cent., 60·1 per cent., and 8·5 per cent. respectively.

The actual work force, that is the number of people actually in work, comprises 38·5 per cent. of the population and as the number of persons over 65 years increases, as it will with advances in medical science, the burden on this group will become heavier. Many members of the older age group are quite capable of supporting themselves if allowed to work and sooner or later the question of whether we can allow people to retire when they are capable of working will have to be faced.

With an increasing knowledge of care of the aged, the expectation of life at birth will be further increased which will necessitate provision for increased medical care for this group.

The birth rate increased by 0·6 per thousand population while the infant mortality rate decreased from 21·0 to 20·0 per 1,000 live births.

As previously, diseases of the circulatory system were the chief cause of death with cancer as the second principal cause. There was an increase in the number of deaths from cancer of the lung.

The Queensland Health Education Council is carrying out an active campaign in regard to the association of smoking with lung cancer. It is hoped that the results of this will be reflected in a lower death rate when the children of today reach the 45 years age group. Deaths from lung cancer increased from 203 males and 28 females in 1960 to 219 males and 31 females in 1961.

There was an increase in deaths from traffic accidents. Research into traffic accidents is being carried out by Drs. K. Jamieson and J. Tonge, assisted by Health Inspector J. Kennedy, under a grant from the National Health and Medical Research Council.

The incidence as shown by notifications continues to rise, cause for concern and warrants investigation during the coming year.

COMMUNICABLE DISEASES

There was an increase in notifications received from 2,740 in 1960-61 to 2,962. The increase was due to an epidemic of poliomyelitis and the increase in the number of notifications of infective hepatitis.

Infective Hepatitis

The incidence as shown by notifications continues to rise, 1,060 being received as against 855 for 1960-61. Infective hepatitis has been known as a disease of war for the last century but it is only since the last war that its incidence has caused concern in the civilian community. Three hundred and sixty-one notifications were received from the metropolitan area as against 699 from the country. While the disease generally is mild and recovery is uneventful, when complications do occur they may cause severe illness or even death. Prevention is difficult but emphasis should be placed on personal hygiene.

Poliomyelitis

An epidemic of poliomyelitis occurred during the period under review, 266 notifications being received as against 29 for the previous year, of which 24 were received for the January–June 1961 period. During the July–December period the number of notifications received increased and continued into January 1962, after which the numbers fell sharply.

It was well known from the commencement of immunisation that the Type III virus component of the Salk vaccine produced a lower degree of immunity than Types I and II and, in order to boost the level of antibodies, approval was requested from the Commonwealth Health Department to give a fourth injection. This was given and most Local Authorities are co-operating in making a fourth injection available free of charge to children under 15.

Queensland was the first State to make Salk vaccine available for use by private practitioners so that it would be convenient for the adult population to be immunised. Only approximately 50 per cent. availed themselves of the opportunity to protect themselves against poliomyelitis. Adults should remember that although they are not as susceptible to infection as children when they do contract the disease it usually causes severe paralysis. Parents are again urged to have their children fully immunised before the summer months, and those adults who have not been immunised should arrange for this to be done forthwith.

Diphtheria

Four notifications were received. Two were for the Greater Brisbane area and two for the Moreton Shire. Three had not been immunised while the fourth had not completed the primary course. There was one death, a child aged two years who lived at Stafford.

It is the responsibility of parents to see they avail themselves of the opportunity to have their children immunised not only against diphtheria but against all communicable diseases for which there is a protecting agent. Local Authorities have co-operated with the Department in making free immunisation available to children and parents accept a grave responsibility when they fail to take advantage of this, particularly when a child dies.

Tetanus

The number of notifications received continues to fall. Immunisation with triple antigen commenced in 1952-53 and the value of immunisation is reflected in the falling incidence of this disease. No immunisation procedure confers 100 per cent. protection but a fully immunised person usually develops a mild attack when he does contract the disease.

SECTION OF ENTHETIC DISEASES

The increase in the incidence of venereal disease continued: 1,363 notifications for gonorrhoea were received as against 1,202 the previous year. There was a further decrease in the incidence of syphilis, greatest in the primary and secondary types—the stages in which the disease is communicable. The incidence of venereal disease in the 15-19 years age group continues to increase and is a matter of grave concern to the community generally. It is the result of lack of parental discipline and an unsatisfactory home life and is inevitable when teenagers are allowed to roam the streets as they do.

SECTION OF FOOD AND DRUGS

The National Health and Medical Research Council, in an endeavour to achieve uniformity of labelling of drugs, recommended model regulations to States. Queensland adopted them in 1958 and as yet is the only State to do so. Recent publicity given to the malformation of babies caused by the use of thalidomide by their mothers during pregnancy has alerted all Health Departments to the necessity of controlling new drugs. This will mean that new drugs will only be allowed to be sold by prescription. This is obviously not sufficient as thalidomide was a restricted drug. Most new drugs come from overseas; their entry into Australia can therefore be controlled. A central authority should be established which should be responsible for recommending approval for the importation of drug for use by medical practitioners. In addition to assessing the results of research carried out by the manufacturers it could carry out clinical trials if considered necessary.

"The Dangerous Substances Regulations" were gazetted on 2nd September for the purpose of protecting infants against poisoning in the home. The Regulations were challenged in the Supreme Court by a southern manufacturer but the decision given was favourable to the Department. It is understood an appeal will be made to the High Court. It was pleasing to see the co-operation by Queensland manufacturers which was given to the Department in implementing the Regulations.

SECTION OF ENVIRONMENTAL SANITATION

There was a further reduction in the number of notifications for lead poisoning. In 1890 Dr. Lockhart Gibson attributed symptoms of vomiting, wasting of muscles of the palm, and wrist drop to lead poisoning. He carried out research in conjunction with Dr. Jefferis Turner during the next twelve years but had difficulty in having accepted his views that lead in paint which had powdered was the source of the lead which was ingested. In 1917 he urged the replacement of lead in paint by zinc and, as a result of his work, lead in paint for the painting of houses was restricted to 5 per cent. by an amendment of the Health Act in 1922. There is now a total prohibition of lead in paint for the painting of houses. The value of this legislation is seen in the fact that the incidence of chronic nephritis in Queensland which was high in the younger age groups thirty years ago now approximates the figure for Australia.

The use of lead in industrial paints is still permitted as it is considered no satisfactory replacement has yet been found.

DIVISION OF TUBERCULOSIS

For some time the accommodation for the Chest Clinic in George Street has been inadequate for its requirements. The erection of the Health and Welfare building on the site where the Clinic was situated necessitated transfer to temporary premises and a wing of the old Lady Bowen Hospital was converted for this purpose by the Department of Public Works which is deserving of the highest commendation for a job well done.

The notifications of tuberculosis have again decreased, 721 being received this year as against 767 the previous year.

The number of notifications as well as the death rate continue to fall. The latter can be explained by improved methods of treatment but no explanation has been found for the fall of incidence. Practically all active cases are notified as this is necessary to receive the tuberculosis allowance. The amount of sunshine and living conditions in Queensland could be an explanation.

The value of mass X-ray is seen in the following table:—

Year	No. of Notifications Received	
	Cairns	Townsville
1957	35	63
1958	45	60
1959	60	68
*1960	103	170
1961	44	55

* Compulsory X-ray was carried out.

The large number of notifications received was due to the unknown case being discovered by the mass X-ray survey. A number of notifications in 1961 were a carry-over from the previous year and it is anticipated there will be a further fall this year. In addition to finding the unknown case, the survey discovers sufferers from other conditions such as carcinoma of the lung and abnormalities of the heart.

The value of pasteurisation of milk and the tuberculin testing of cows is shown by the fact no case of bovine tuberculosis has occurred since at least 1953.

DIVISION OF INDUSTRIAL MEDICINE

The work of this Division of the medical services is mainly to solve the problems brought about by the conditions of work in industry. Surveys are carried out into environmental conditions likely to cause illness and suggestions are put forward to remedy them. Attention is paid to safety measures.

The extension of the use of radioactive substances and irradiating apparatus in industry has necessitated control against excessive radiation. "The Radioactive Substances Regulations," based on the model regulations of the National Health and Medical Research Council, became operable this year. A radiation health physicist has been appointed to advise industry and works in the field of medical radiology on protection measures. Surveys will be carried out to ensure adequate protective measures are provided in the various fields.

DIVISION OF MATERNAL AND CHILD WELFARE

I must again express concern at the number of maternal deaths which increased from 0·47 (16 deaths) per 1,000 live births in 1958 to 0·76 (28 deaths) in 1961. The expert committee has met on a number of occasions. A confidential report on a form prepared by the Committee is filled out by the doctor in charge of the patient and is discussed by the Committee and the comments made sent to the doctor.

The purpose of the Committee is for a close study of the causes of death to determine if any were avoidable and if so, how they could be prevented in the future. As a step to improving the maternity services of Queensland the specialists on the Committee are preparing articles on the various factors which contribute to maternal deaths. The first of these "The Prevention and Management of Eclampsia" has already been distributed. I desire on behalf of the Committee to express my appreciation of the co-operation of those members of the medical profession who have been asked for reports.

Because of the comparatively small number of deaths occurring it will be some time before any conclusions can be reached but inadequate ante-natal care has been found to be an important avoidable factor in the prevention of maternal deaths.

Another research project which must be carried out is to ascertain whether deaths of infants from prematurity and congenital malformations can be avoided. These form 40·4 per cent. of the total deaths of infants under one year of age.

DIVISION OF MENTAL HYGIENE

The advances in modern methods of treatment have resulted in a steady decline in the number of patients admitted to mental hospitals and a shorter stay for those whose condition necessitated treatment in these institutions. This has resulted in a steady fall in the number of patients resident in our mental hospitals. A number of elderly patients whose mental symptoms were caused by physical deterioration of old age and who were only admitted because beds were not available in general hospitals have now been transferred to senile annexes and this also has been a factor in the decline.

The policy now is to endeavour to treat patients suffering from mental illness while they remain in the community or, if their condition necessitates it, in wards of general hospitals. For this reason approval was given for alterations to be carried out to Ward 16 and Lowson House at the Brisbane Hospital to provide for outpatient and day hospital treatment as well as inpatient treatment. If it is considered that those who require inpatient care will be discharged in six weeks they will be treated at the Brisbane Hospital; if the period of treatment will take 6–9 months they will be cared for in the neuro-psychiatric hospital which is being built at Chermside but if a longer period of treatment or custodial care only is required they will be admitted to one of the mental institutions. This means there will be a large decrease in the number of beds required in mental hospitals. Alterations to buildings in the Chronic Section of the Princess Alexandra Hospital will be made after the Geriatric Unit is completed to provide for psychiatric wards, psychiatric outpatients department, and a day hospital.

The policy of "open" wards has been extended in the various hospitals.

When this programme is completed and with the passage of a new Mental Hygiene Bill during the coming year, Queensland will have a mental hygiene service better than any in Australia and equal to any service elsewhere.

DIVISION OF WELFARE AND GUIDANCE

The Wilson Youth Hospital was opened in July, 1961, and consists of an outpatient department and inpatient section of 36 beds. The Children's Court is accommodated here. The majority of children referred were from the Children's Court and the State Children Department and varied from naughty boys who were difficult to control to potential criminals.

The Guidance Clinics are fulfilling an important role in the field of social medicine as, by early ascertainment and treatment, many troubles in the child's later life which might lead to delinquency will be prevented.

DIVISION OF GERIATRICS

When I returned from overseas in 1958 I recommended the establishment of a Geriatric Unit. Dr. P. Livingstone who was the Registrar in charge of the Chronic Section of Princess Alexandra Hospital was particularly interested in the care of the aged and arrangements were made for his appointment to the staff of the late Dr. Marjory Warren of the West Middlesex Hospital Geriatric Unit. He was appointed Director of Geriatrics on his return. In the meantime a hospital ward of the Chronic Section of the hospital was renovated as a geriatric ward and is equal to any geriatric ward I saw overseas. A second ward is nearing completion and when the day hospital, outpatient section, and occupational therapy centre are finished we shall have a Geriatric Unit of which we may well be proud.

DIVISION OF LABORATORY SERVICES

Laboratory of Microbiology and Pathology

The work of the Laboratory continues to expand. The number of coronial autopsies performed was 794, an increase of 125 over the previous year. It has continued to co-operate with the Queensland Institute of Medical Research in research into Q fever and leptospirosis. The standard of work in leptospiro is has been recognised by the World Health Organisation which invited the Laboratory to be its Leptospiral Reference Centre for Australasia. It is co-operating with the Neurosurgical Unit of the Brisbane Hospital in research into traffic injuries and this work has received the commendation of the National Health and Medical Research Council. It carries out clinical pathology free of charge for private medical practitioners and plays an important part in public health by examining bacteriologically food and water as well as being re ponsible for the bacteriology of the communicable diseases.

Further expansion is limited by accommodation but this will be overcome when the Health and Welfare Building which is in the course of construction is completed.

Government Chemical Laboratory

The services performed by the laboratories under the control of the Director, Government Chemical Laboratory, Government Analyst, and Chief Inspector of Explosives, are are the chemical analyses required in implementing the provisions of the Health Act. The Laboratory also undertakes work for other departments, both State and Commonwealth, as well as for private medical practitioners and the general public.

Of 197 samples of minced meat examined, 34 showed evidence of adulteration with sulphur dioxide. Despite prosecutions butchers continue to add this preservative to a food which is used in the diet of babies, invalids, and the aged although it is pleasing to note that the proportion found positive is less than previously. There was an increase in the number of milk samples examined but there was a decrease in the number adulterated with water. This is important in that adulteration of milk by water not only lowers the food value of the milk but might also result in intestinal disease. It is, therefore, necessary to police the Regulations governing the sale of minced meat and milk regularly in order to safeguard the health of the community.

FLYING SURGEON SERVICE

As I have mentioned previously the appointment of a Flying Surgeon was the most forward step made in giving security in health to people residing in north-western, central, and south-western Queensland since the establishment of the Royal Flying Doctor Service. Most of the towns visited are "one doctor" towns staffed by doctors with limited experience. Prior to the appointment of the Flying Surgeon these young graduates were compelled to undertake difficult emergency operations with the Matron giving the anaesthetic. It is to the credit of this "team" that they did so with skill which was not expected in doctors so recently graduated. Now in an emergency help can be obtained within 2-3 hours. The Flying Surgeon accompanied by an anaesthetist with equipment to give modern anaesthetics brings specialist surgery to the outback.

VITAL STATISTICS

Population

The estimated population of Queensland at 31st December, 1961, was 1,522,329, an increase of 20,043 (or 1·3 per cent.) for the year. The estimated population living in the Metropolitan area was 624,000, an increase of 13,600 (or 2·2 per cent.) during 1961.

The population density per square mile is 2·28 persons for the whole of Queensland, 1,316 persons in the Metropolitan area, and 1·35 persons for the rest of the State; 41·0 of the population of the State reside in the metropolitan area.

TABLE I

SHOWING POPULATION OF AUSTRALIAN STATES AND THE PERCENTAGE OF ESTIMATED AUSTRALIAN POPULATION RESIDENT IN EACH STATE DURING CERTAIN YEARS (AT 31ST DECEMBER), SINCE 1935

Year	New South Wales		Victoria		Queensland		South Australia		Western Australia		Tasmania		Australian Capital Territory	Australia
	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Number
1935	2,658,672	39·3	1,841,595	27·3	971,297	14·4	586,762	8·4	449,623	6·6	233,623	3·5	14,890	6,755,662
1940	2,790,948	39·4	1,914,918	27·1	1,031,452	14·6	599,056	8·4	474,076	6·7	244,002	3·5	23,134	7,077,586
1945	2,932,998	39·5	2,015,107	27·1	1,084,864	14·6	630,882	8·5	490,088	6·6	250,280	3·4	25,978	7,430,197
1950	3,241,057	39·0	2,237,182	28·1	1,205,418	14·5	722,843	8·7	572,649	6·9	290,333	3·5	37,999	8,307,481
1955[a]	3,526,534	37·9	2,546,332	27·3	1,358,858	14·6	834,661	9·0	668,609	7·2	324,919	3·5	33,960	9,311,825
1958[a]	3,728,800	37·5	2,745,165	27·6	1,449,337	14·6	908,053	9·1	707,196	7·1	343,898	3·5	42,953	9,947,358
1959[a]	3,794,077	37·3	2,811,429	27·7	1,477,161	14·5	934,497	9·2	718,691	7·1	351,349	3·5	49,950	10,160,968
1960[a]	3,877,261	37·3	2,888,290	27·8	1,502,286	14·5	957,022	9·2	731,033	7·0	355,969	3·4	55,272	10,391,920
1961	3,953,636	37·3	2,949,848	27·8	1,522,329	14·4	979,726	9·2	746,169	7·0	364,126	3·4	62,091	10,603,936

[a] Revised in accordance with preliminary results of the census of 30th June, 1961.

Births

During 1961, births registered in Queen land totalled 36,637, an increase of 1,424 on the previous year, and is the highest number on record. The crude birth rate was 24·2, compared with 23·6 in 1960. The births comprised 18,863 males and 17,774 females, giving a masculinity rate of 106·1.

The natural increase (excess of births over deaths) was 23,881, being equal to an increase of 1·6 per cent. of the population.

The birth rate in Queensland remains relatively high, and the rate of natural increase is very satisfactory.

TABLE II

CRUDE BIRTH RATE (PER 1,000 POPULATION)

——	1956	1957	1958	1959	1960	1961
Commonwealth of Australia[1]	22·4	22·9	22·6	22·6	22·4	22·9
Queensland[1]	**23·5**	**24·0**	**23·6**	**24·3**	**23 6**	**24·2**
New South Wales[1] ..	21·3	21·9	21·7	21·5	21·4	22·1
Victoria[1]	22·5	22·8	22·5	22·4	22·4	22·6
South Australia[1]	22·3	22·3	22·3	22·1	22·2	23·1
Western Australia[1] ..	25·1	24·6	23·9	24·0	23·4	23·2
Tasmania[1]	25·2	25·7	25·5	25·3	25·5	25·4
New Zealand	24·7	24·8	25·2	25·1	25·0	25·5
United Kingdom ..	16·1	16·5	16·8	16·9	17·5	17·8
United States of America	24·9	25·0	24·3	24·1	23·6	23·4
Canada	28 0	28·3	27·6	27·5	26·8	26·0

[1] Rates revised in accordance with preliminary results of the Census of 30th June, 1961.

Deaths

For the year 1961 deaths from all causes totalled 12,756, giving a crude death rate (deaths per 1,000 mean population) of 8·4 compared with 8·3 in the previous year, and still below the crude death rate of the Commonwealth of Australia. Table IV. compares the crude death rates of Queensland, other States, and certain overseas countries since 1956.

Diseases of the heart, hypertension and vascular lesions affecting the nervous system were again the greatest cause of death in the population.

There were 1,838 deaths from cancer as compared with 1,801 in 1960. This is about 14 per cent. of all deaths.

In every 100 male deaths 44 died of a degenerative vascular disease, 14 of cancer and 8 of accident. In every 100 female deaths the respective figures are 45, 15, and 4. The fatal accident rate was much higher in males than in females.

TABLE III

CRUDE DEATH RATE (PER 1,000 POPULATION)

——	1956	1957	1958	1959	1960	1961
Commonwealth of Australia	9·1	8·8	8·5	8·9	8·6	8·5
Queensland[1]	**8·8**	**8·3**	**8·0**	**8·4**	**8 3**	**8·4**
New South Wales[1] ..	9·6	9·2	8·8	9·4	9 1	9 0
Victoria[1]	9·2	9·1	8·7	9·0	8·6	8·4
South Australia[1] ..	8·9	8·7	8·6	8·6	8·3	8·1
Western Australia[1] ..	8·3	7·7	7·9	7·7	7·9	7·8
Tasmania[1]	7·8	8·1	8·1	8·1	7·7	7·9
New Zealand	9·0	9·3	8·9	9·1	8·8	9 0
United Kingdom ..	11·7	11·5	11·7	11·7	11·5	12 0
United States of America	9·4	9·6	9·5	9·4	9·5	9·3
Canada	8·2	8·2	7 9	8·0	7·8	7·7

[1] Rates revised in accordance with preliminary results of the Census of 30th June, 1961.

Marriages

Registration of marriages during the year totalled 10,392, compared with 10,227 in 1960. The marriage rate was 6·9 per thousand mean population, the same as in the previous year. Marriages of minors during the year totalled 5,629, of whom 1,303 were males and 4,326 females.

Infant Mortality

The infant mortality rate of Queensland and other States and certain overseas countries is shown in Table V., while Table IV. is a composite one showing the births rates, infant mortality and reproduction rates of Queensland compared with the Commonwealth of Australia.

The net reproduction rate is higher than the Australian average, whilst the maternal mortality rate declined from 5·77 in 1911 to 0·76 in 1961.

If the crude death rate had remained at the level prevailing in 1900, over 4,400 additional deaths would have occurred in Queensland during 1961. In addition, the expectation of life has been increased by 17 years during that period.

TABLE IV

BIRTH, INFANT MORTALITY, MATERNAL MORTALITY, AND REPRODUCTION RATES, QUEENSLAND AND AUSTRALIA

——	Crude Birth Rate		Infant Mortality Rate		Maternal Mortality Rate (1)		Gross Reproduction Rate (2)		Net Reproduction Rate (3)	
	Queensland	Australia	Queensland	Australia	Queensland	Australia	Queensland	Australia	Queensland	Australia
1946	24·8	23·7	29·3	29·0	2·26	1·85	1·55	1·46	1·42	1·33
1947	25·6	24·1	30·8	28·5	1·62	1·87	1·64	1·49	1·54	1·36
1948	24·7	23·1	28·0	27·8	1·47	1·40	1·59	1·45	1·51	1·33
1949	24·0	22·9	24·7	25·3	1·44	1·21	1·56	1·46	1·48	1·33
1950	24·4	23·3	24·8	24·5	1·45	1·09	1·60	1·49	1·52	1·42
1951	24·2	23·0	25·7	25·2	1·18	1·05	1·62	1·49	1·54	1·21
1952	24·6	23·3	24·9	23·8	1·03	0·94	1·67	1·55	1·59	1·47
1953	23·9	22·9	25·0	23·3	0·71	0·62	1·65	1·56	1·57	1·48
1954	23·7	22·5	22·3	22·5	0·96	0·69	1·67	1·56	1·62	1·50
1955	24·1*r*	22·6	20·3	22·0	0·62	0·64	1·71	1·59	1·65	1·53
1956	23·5*r*	22·5	22·7	21·7	0·89	0·56	1·72	1·61	1·66	1·55
1957	24·0*r*	22·9	21·6	21·4	0·62	0·63	1·78	1·66	1·72	1·60
1958	23·6*r*	22·6	19·4	20·5	0·47	0·50	1·79	1·67	1·72	1·60
1959	24·3*r*	22·6	20·3	21·5	0·59	0·46	1·87	1·68	1·80	1·61
1960	23·6*r*	22·4	21·0	20·2	0·68	0·53	1·84	1·68	1·77	1·61
1961	24·2	22·9	20·0	19·5	0·76	0·44	1·86*n*	1·73	1·79*n*	1·66

r Revised in accordance with preliminary results or the census of 30th June, 1961. *n* Not available.

(1) *Maternal Mortality Rate.*—Deaths from puerperal causes per 1,000 live births.

(2) *Gross Reproduction Rate.*—Represents the number of female children born on the average to women living right through the child-bearing years if the conditions on which the rate is based continue.

(3) *Net Reproduction Rate.*—Is the gross reproduction rate corrected for deaths of females from birth to the end of the child-bearing period. It is a more accurate index than the gross reproduction rate. Unless it exceeds unity the population is not replacing itself.

TABLE V

INFANT MORTALITY RATES (DEATHS UNDER ONE YEAR PER 1,000 LIVE BIRTHS)

——	1955	1956	1957	1958	1959	1960	1961
Commonwealth of Australia ..	22·0	21·7	21·4	20·5	21·5	20·2	19·5
Queensland	**20·3**	**22·7**	**21·7**	**19·4**	**20·3**	**21·0**	**20·0**
New South Wales	24·9	23·5	22·7	21·3	22·7	21·2	20·8
Victoria	18·4	19·3	20·2	19·2	21·2	18·5	17·8
South Australia	23·3	19·9	20·6	22·4	20·7	18·9	20·0
Western Australia	22·4	22·7	21·1	21·5	20·2	21·6	19·7
Tasmania	23·4	22·0	20·2	19·5	23·4	19·1	16·8
New Zealand	20·1	19·4	20·0	19·4	19·9	19·7	19·1
United Kingdom	25·9	24·4	24·0	23·4	23·1	22·5	*
United States of America	26·4	26·0	26·3	27·1	26·4	25·7	*
Canada	31·3	31·9	30·9	30·2	28·4	*	*

* Not available.

The causes of death to residents of Queensland during 1961 are shown in Table VI.

TABLE VI

SHOWING CAUSES OF DEATH OF RESIDENTS OF QUEENSLAND, 1958–1961

Causes of Death	Males	Females	Total 1961	Persons		
				1960	1959	1958
Tuberculosis of Respiratory System	54	12	66	80	74	80
Tuberculosis, other	4	2	6	3	4	3
Diphtheria	..	1	1	1	..	..
Whooping Cough	1	..	1	..	1	1
Tetanus	8	2	10	13	13	9
Acute Poliomyelitis	2	..	2	..	..	..
Measels	1	2	3	1	3	1
Infectious Hepatitis	4	7	11	15	10	15
Other Infectious and Parasitic Diseases	28	22	40	55	59	78
Malignant Neoplasms	1,038	800	1,838	1,801	1,872	1,703
Neoplasms, Benign and Unspecified	18	24	42	28	39	56
Hay Fever and Asthma	34	26	60	55	58	41
Diabetes Mellitus	49	94	143	145	141	156
Other Allergic, Endocrine System, Metabolic, and Nutritional Diseases	17	15	32	34	40	35
Pernicious and other Hyperchromic Anæmias	4	10	14	9	7	10
Other Diseases of the Blood and Blood-forming Organs	20	23	43	45	38	44
Mental, Psychoneurotic and Personality Disorders	43	14	57	87	79	64
Vascular Lesions affecting the Central Nervous System	827	911	1,738	1,659	1,589	1,416
Other Diseases of the Nervous System and Sense Organs	86	57	143	174	203	203
Diseases of the Heart	2,501	1,449	3,950	3,784	3,618	3,243
Hypertensive Disease	192	208	400	467	497	491
Other Diseases of the Circulatory System	283	201	484	439	351	327
Influenza	10	12	22	16	92	12
Lobar-pneumonia	51	35	86	87	109	92
Broncho-penumonia	112	90	202	188	155	177
Other and Unspecified Pneumonia	62	43	105	125	126	70
Bronchitis	180	26	206	189	185	138
Other Diseases of Respiratory System	93	45	138	115	181	199
Diseases of Stomach and Duodenum	89	23	112	113	99	97
Appendicitis	21	6	27	17	24	16
Diseases of Liver, Gallbladder, and Pancreas	71	46	117	123	116	120
Other Diseases of Digestive System	100	83	183	162	184	176
Nephritis and Nephrosis	109	106	215	219	210	237
Diseases of Male Genital Organs	68	..	68	69	102	83
Other Diseases of Genito-Urinary System	76	101	177	173	115	117
Deliveries and Complications of Pregnancy, Childbirth, and Puerperium	..	28	28	24	21	16
Diseases of the Skin and Cellular Tissue	13	9	22	21	26	26
Diseases of the Bones and Organs of Movement	24	22	46	49	40	51
Congenital Malformations	109	78	187	205	198	148
Intra-cranial and Spinal Injury at Birth	36	25	61	50	66	68
Other Birth Injury	25	14	39	60	40	40
Post-Natal Asphyxia and Atelectasis	49	29	78	75	68	61
Infections of Newborn	13	7	20	21	29	25
Immaturity Unqualified	76	65	141	140	118	139
Other Diseases Peculiar to Early Infancy	66	45	111	96	75	69
Senility without mention of Psychosis	95	97	192	122	123	131
Symptoms Referable to Systems or Organs	5	6	11	8	5	10
Ill-defined and Unknown Causes	18	11	29	26	24	23
Motor Vehicle Traffic Accidents	259	90	349	331	354	354
Accidental Falls	62	72	134	171	212	208
Accidental Drowning and Submersion	53	5	58	52	72	73
Other Accidents	202	44	246	239	254	268
Suicidal and Self-Inflicted Injury	172	60	232	172	197	212
Homicide and Injury Purposely Inflicted by Other Persons	13	7	20	17	33	23
Total from all Causes	7,546	5,210	12,756	12,370	12,349	11,455

DIVISION OF PUBLIC HEALTH SUPERVISION

Deputy Director-General of Health and Medical Services: D. W. Johnson, M.B., B.S., (Syd.), D.T.M. & H. (Syd.)

Health Officer: M. H. Gabriel, M.B., B.S., (Q'ld.)

Chief Inspector of Food and Drugs: W. H. Kelly

Chief Sanitary Inspector: W. D. Pryor

Secretary to Director-General of Health and Medical Services: R. Woodley

Microscopist-in-Charge, Hookworm Control: Vacant

Inspectors in Charge of District Offices

Townsville: H. P. Lowes

Toowoomba: W. J. Shields

Mackay: R. A. Burke

Cairns: W. T. Johnston

Rockhampton: R. G. C. J. Cuffe

Bundaberg: C. V. James

SECTION OF EPIDEMIOLOGY

Tables VII and VIII show the reported incidence of notifiable diseases during the fiscal year, while Table IX shows the incidence of the same diseases for the calendar year 1961.

During 1961-62, notifications totalled 2,957 (1,083 in Brisbane, 1,874 in country districts) compared with 2,740 (941 and 1,799) in the previous year. Chief diseases to decrease were infantile diarrhoea (—71), Q. fever (—71), anchylostomiasis (—44), rheumatic fever (—42), tuberculosis (—46), lead poisoning (—26), tetanus (—22), and scarlet fever (—17). Notifications which increased were poliomyelitis (+237), infective hepatitis (+205), leptospirosis (+32), rubella (+28), meningitis (+20), malaria (+11), and ornithosis (+7).

Too much significance should not be given to year to year fluctuations as indicating reduced incidence. To a certain extent, reduced notifications reflect reduced incidence, but many diseases seem to have periodic prevalence. Poliomyelitis is an example, and reference to the current outbreak is made later. Other diseases are endemic but appear to be waning. Examples are tuberculosis and scarlet fever. Finally, some diseases are poorly reported for a variety of reasons. When paired sera are required for laboratory diagnosis, the patient may be well when final diagnosis is made. Q. fever and leptospirosis are typical of this group. A few diseases, such as melioidosis and ornithosis, have only recently been made notifiable and are not yet reported as often as they really occur. On the other hand, it is literally true that some doctors never report a notifiable disease, and this is difficult to understand, because the new notification form is simple and is quickly filled in. I hope that practising doctors realise that they have a duty to their colleagues as well as to the State by reporting notfiable diseases. Those which are poorly reported at present are the gastrointestinal infections—infantile diarrhoea, bacillary dysentery, amoebic dysentery—and neo-natal infections. Breast abscess and neo-natal infection were made notifiable at the request of the Queensland Branch of the Australian Medical Association, yet in two years only 126 cases of breast abscess were reported and only two cases of neo-natal infection. This is certainly not the true incidence of these rather common conditions.

TABLE VII

Notifiable Diseases (Exclusive of Venereal Diseases) 1st July, 1961, to 30th June, 1962
Metropolitan Area (Population at 1st July, 1961—593,668)

Diseases	Months												Totals 1961–62	Totals 1960–61
	1961						1962							
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June		
Anchylostomiasis	1	..	..	..	..	..	..	3	1	1	..	1	7	20
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Breast Abscess	5	..	..	1	1	1	1	1	..	2	..	..	12	21
Brucellosis	1	..	..	..	..	..	..	..	..	1	..	..	2	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile)	11	14	3	8	7	7	1	4	1	..	1	2	59	121
Diphtheria	..	..	..	..	..	..	2	..	..	..	..	..	2	2
Dysentery (Amoebic)	..	..	..	2	..	..	..	..	1	..	..	..	3	2
Dysentery (Bacillary)	1	1	..	1	8	3	2	4	2	..	..	..	22	26
Encephalitis	..	..	..	..	..	3	..	2	2	1	..	..	8	..
Filariasis	..	..	..	..	..	..	..	..	..	..	..	1	1	..
Hepatitis (Infective)	25	14	26	41	79	43	20	29	27	21	18	18	361	195
Hydatid Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lead Poisoning	..	..	1	..	1	..	..	..	3	1	..	..	6	5
Leprosy	..	..	..	..	1	..	..	..	1	..	..	..	2	1
Leptospirosis	..	..	..	..	1	2	1	..	1	2	2	1	10	7
Malaria	..	..	..	4	3	1	2	3	1	2	4	4	24	21
*Melioidosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Meningitis	1	..	1	1	1	..	2	2	3	1	3	6	21	3
Neo-Natal Infections	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ornithosis (Psittacosis)	..	..	..	..	..	1	..	..	1	..	..	2	4	1
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis (Paralytic and Non-Paralytic)	5	10	..	6	14	42	45	12	5	9	1	1	150	5
Puerperal Infections	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Q. Fever	1	..	2	3	2	..	1	1	2	1	1	1	15	34
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever	1	1	5	1	3	2	1	1	4	2	4	3	28	64
Rubella	..	..	5	2	3	2	..	1	1	2	..	..	16	12
Scarlet Fever	8	3	5	6	3	..	2	4	..	2	4	14	51	81
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Taeniasis	..	..	..	1	..	..	..	..	..	..	..	..	1	..
Tetanus	..	..	1	1	..	..	1	..	..	1	..	..	4	9
Tuberculosis	19	16	22	23	17	21	12	24	21	23	23	47	268	303
Typhoid Fever (including Paratyphoid)	..	..	..	..	..	..	1	..	2	..	..	..	3	2
Typhus Fever—														
Epidemic	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Murine	..	..	1	..	..	..	..	1	..	..	..	1	3	4
Scrub	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tick	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	79	59	72	101	144	128	94	92	79	72	61	102	1,083	941

* Declared a notifiable disease on 8th September, 1960.

TABLE VIII

NOTIFIABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES) 1ST JULY, 1961, TO 30TH JUNE, 1962
EXTRA-METROPOLITAN AREA (POPULATION AT 1ST JULY, 1961—925,160)

Diseases	Months												Totals 1961–62	Totals 1960–61
	1961						1962							
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June		
Anchylostomiasis	2	7	1	1	3	1	4	4	4	5	1	1	34	65
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Breast Abscess	..	1	1	4	5	1	4	3	4	2	1	8	34	27
Brucellosis	..	..	..	..	..	..	..	1	1	1	2	..	5	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	1	..	..	1	..	..	2	1
Diarrhoea (Infantile)	..	3	1	6	12	..	8	8	1	2	..	11	52	61
Diphtheria	1	..	..	..	..	..	..	1	..	..	..	..	2	6
Dysentery (Amoebic)	..	..	1	..	..	..	..	..	..	..	..	..	1	2
Dysentery (Bacillary)	..	..	..	..	..	3	1	..	5	1	1	1	12	14
Encephalitis	..	1	..	..	3	1	2	1	1	1	..	..	10	2
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hepatitis (Infective)	73	51	50	39	92	57	84	78	61	35	44	35	699	660
Hydatid Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lead Poisoning	2	..	2	..	1	..	..	1	3	..	2	1	12	39
Leprosy	1	3	..	..	..	..	..	..	..	..	..	1	5	2
Leptospirosis	11	2	8	5	7	6	12	12	10	14	9	9	105	76
Malaria	3	..	1	2	4	..	1	2	1	1	1	4	20	12
*Melioidosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Meningitis	1	2	..	2	5	3	2	2	2	4	8	2	33	31
Neo-Natal Infections	..	..	..	..	1	..	..	1	..	..	..	..	2	..
Ornithosis (Psittacosis)	..	..	1	..	..	..	..	..	1	2	..	1	5	1
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis (Paralytic and Non-Paralytic)	3	2	2	1	14	33	32	14	4	5	1	5	116	24
Puerperal Infections	2	2	2	1	1	..	1	3	2	2	1	1	18	27
Q. Fever	10	4	5	3	12	7	6	5	6	7	8	12	85	137
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever	3	5	3	3	7	1	5	6	2	2	13	6	56	62
Rubella	..	1	1	4	12	5	..	..	..	..	..	2	25	1
Scarlet Fever	7	3	2	8	4	4	5	..	..	21	4	2	60	47
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Taeniasis	..	..	..	..	2	1	1	..	..	..	..	..	4	..
Tetanus	1	..	1	..	4	2	3	..	..	..	..	3	14	31
Tuberculosis	20	22	42	26	33	35	20	60	48	41	31	75	453	464
Typhoid Fever (including Paratyphoid)	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Typhus Fever—														
Epidemic	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Murine	..	..	..	..	..	..	1	1	1	1	1	..	5	5
Scrub	..	3	..	..	..	..	..	..	..	..	..	..	3	2
Tick	1	..	..	..	..	..	..	1	..	..	..	..	2	1
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	141	112	124	105	222	160	193	204	157	148	128	180	1,874	1,799

* Declared a notifiable disease on 8th September, 1960.

TABLE IX

NOTIFIED INCIDENCE OF COMMUNICABLE DISEASES IN QUEENSLAND (EXCLUSIVE OF VENEREAL DISEASE) SECTION 29 OF "THE HEALTH ACTS, 1937 TO 1960" DURING THE CALENDAR YEAR OF 1961

Diseases	Metropolitan Area	Outside Areas	Total for Queensland 1961	Total for Queensland 1960
Anchylostomiasis	17	23	40	82
Anthrax	..	..	..	..
Breast Abscess	16	17	33	71
Brucellosis	1	..	1	..
Cholera	..	..	..	..
Dengue	..	..	..	1
Diarrhoea (Infantile)	105	37	142	175
Diphtheria	2	2	4	6
Dysentery (Amoebic)	3	2	5	3
Dysentery (Bacillary)	30	10	40	47
Encephalitis	3	5	8	5
Filariasis	..	..	..	..
Hepatitis (Infective and Serum)	329	693	1,022	719
Hydatid Disease	..	..	..	..
Lead Poisoning	2	17	19	64
Leprosy	1	5	6	2
Leptospirosis	5	83	88	105
Malaria	15	17	32	58
Meningitis	5	30	35	30
Neo-Natal Infections	..	1	1	..
Ornithosis (Psittacosis)	2	2	4	2
Plague	..	..	..	..
Poliomyelitis (Paralytic and Non-Paralytic)	82	72	154	5
Puerperal Infections	2	23	25	29
Q. Fever	15	116	131	255
Relapsing Fever	..	..	..	..
Rheumatic Fever	34	44	78	126
Rubella	15	23	38	12
Scarlet Fever	51	46	97	128
Smallpox	..	..	..	..
Taeniasis	1	3	4	..
Tetanus	8	25	33	42
Tuberculosis	285	394	679	844
Paratyphoid	1	2	3	..
Typhoid Fever	2	3	5	7
Typhus Fever—				
Epidemic	..	..	..	..
Murine	5	3	8	4
Scrub	..	4	4	8
Tick	..	1	1	1
Yellow Fever	..	..	..	..
Totals	1,036	1,701	2,737	2,831

AMOEBIC DYSENTERY

Four cases were reported. One was an aboriginal child at Palm Island, and two were soldiers who had overseas service.

ASCARIASIS

Although not notifiable, infestation with the large roundworm (Ascaris lumbricoides) is of interest because it was found to be heavily endemic at Cherbourg Aboriginal Settlement, about 150 miles north-west of Brisbane. This first came under notice in 1960 when an officer of this Department conducted a hookworm survey at the Settlement. Of 1,047 specimens examined, 215 (20·5 per cent.) contained Ascaris eggs. The help of the Queensland Institute of Medical Research was then sought, and Dr. Dorothea F. Sandars assisted this Department to reduce the incidence very considerably. As indicated in Table X, 48 per cent. of pre-school children (other than infants) and 23 per cent. of school children (5–14 years) had roundworms. Small children play in the soil for hours every day. The rate was surprising, because the Settlement (with the exception of a few outlying houses) had been completely sewered for several years. However, roundworm eggs were found in the damp soil around taps, especially those outside houses, while the sewage sludge had a heavy concentration of eggs. No eggs were found in the filtered sewage effluent, which was chlorinated.

TABLE X

SHOWING INCIDENCE OF ASCARIS INFESTATION AT CHERBOURG SETTLEMENT, 1960, ACCORDING TO AGE GROUPS

——	Examined	Positive	Per cent. Positive
Under 1 year	19	2	10·5
1– 4 years	208	99	47·6
5–10 years	216	64	29·6
10–14 years	171	25	14·6
15–29 years	189	18	9·5
30 years and over ..	205	4	2·0
Not recorded ..	39	3	7·7
All Ages	1,047	215	20·5

Following the survey, four courses of piperazine citrate ("Antepar") were given over a period of 15 weeks. Numbers dosed at each treatment were 1,081 (first treatment), 994 (second), 843 (third), and 983 (fourth). Enormous worm loads were released by these treatments. After the first course, there were 47 aboriginals still harbouring worms; after the second, 17, and after the third, 86 (including some not treated previously). Final results of the survey are not yet available. All sewage sludge is now burned. It will be a long time yet before Ascaris is eliminated from Cherbourg, because the eggs remain viable for years, but at least the situation is under control. Further surveys will be carried out as required.

No other aboriginal settlement surveyed so far has had a high incidence of ascariasis. At Cherbourg, infestation has probably existed and built up over several years.

BREAST ABSCESS

Only 46 cases were reported compared with 48 in 1960-61. Only twelve were reported in Brisbane. This is certainly not the true incidence of this condition.

DENGUE

Since dengue fever was made notifiable in 1959, few cases have been reported. Last year, two occurred—one in Mackay and the other in Caboolture. This is a difficult disease to diagnose unless there is an epidemic, and it is possible that it is being overlooked. The last known cases of dengue occurred from Biloela north between 1953 and 1955. Routine sera submitted to the Queensland Institute of Medical Research have not demonstrated antibodies in samples from centres other than Townsville in the last few years.

DIPHTHERIA

Four notifications were received—all in children. Two belonged to a family living at Stafford, Brisbane, and two lived in the Moreton district. Three had had no diphtheria toxoid and one had not completed the primary course. There is no doubt that this once prolific killer of children will return if immunization is neglected. Fortunately, about 90 per cent. of children in this State have had a basic immunization course against diphtheria.

ENCEPHALITIS

Work carried out at the Queensland Institute of Medical Research has resulted in the isolation of a number of viruses known to be capable of causing encephalitis in man. Amongst the strains isolated from mosquitoes in North Queensland was the virus of Murray Valley encephalitis. It is therefore not unlikely that human cases of these encephalitides occur from time to time. Encephalitis due to polio virus and to other viruses has also been described. During the year, 18 notifications were received. Of these, 11 were under 5 years of age, 4 were in school children, and 3 were in patients whose ages were 15, 34, and 70. Nine lived in the Greater Brisbane area, two in Ipswich, and one each in Beaudesert, Gympie, Mirriwinni, Cairns, Winton, Mount Isa, and the Gold Coast. Unfortunately, in most of these it was not possible to learn the type by virus studies, but this will come as diagnostic virus laboratories are established.

ENTEROBIASIS

Accurate information on the incidence of pinworm infestation in an Australian population is difficult to obtain as little work has been published. It is therefore thought desirable to record here the results of a survey for pinworm carried out at Cherbourg Aboriginal Settlement by this Department and the Queensland Institute of Medical Research in October, 1961.

The adhesive-tape-slide technique was used, and 649 children 15 years and under were tested. Of these, 151 (or 23·3 per cent.) showed eggs of Enterobius vermicularis. Details are set out in Table XI. but the infestation rate was higher in girls (30 per cent.) than in boys (19 per cent.).

Treatment with pyrivinium pamoate ("Vanquin") was given to the entire population. This is a single dose drug. Seven days after treatment, the positive children were again swabbed, and the tapes examined by the same operators. All positives were negative—a significant tribute to the efficacy of the drug used.

TABLE XI

SHOWING RESULTS OF PINWORM SURVEY AT CHERBOURG SETTLEMENT, 1961

Age Group	Number Examined	Positive	Per cent. Positive
Under 1 year	25	0	..
0– 4 years	193	20	10·4
5–10 years	231	54	28·0
10–14 years	185	69	37·3
15 years	15	8	53·3
0–15 years	649	151	23·3

INFECTIVE HEPATITIS

This is a disease almost certainly caused by an enterovirus. Despite many years of intensive research work, the virus was not isolated or grown until 1961, when success was reported by an American drug company. No doubt this has already been confirmed, but already it is likely that a group of viruses is responsible for the clinical condition known as infective hepatitis.

Since it was made notifiable in 1958, hepatitis notifications have increased year by year to such an extent that the increase is no longer probably due to better reporting, but is due to a real increase in prevalence.

Age distribution of notified patients for 1961-62 and for the four years 1958-59 to 1961-62 are found in Table XII. As in previous years, the highest incidence is in children of school age, and this is almost certainly due to the enlarged number of contacts whom a child meets when he goes to school. Up till then, most of his contacts have been confined to his family and to neighbours. The Greater Brisbane area contributed 362 cases, and the statistical districts followed in this order: Moreton (168), Maryborough (145), Downs (110), North Western (96), Townsville (37), Cairns (35), Mackay (31), Rockhampton (26), Far Western (17), Central Western (15), Roma (13), South Western (3), and Peninsula (2). Cloncurry Shire had 78 notifications, most of whom lived in Cloncurry itself. It is salutary to recall that hepatitis virus can be spread by water, and when hepatitis occurs in a town the first question to be asked is whether or not the public water supply is chlorinated. Some local authorities are slow to carry out this vital public health procedure, on the grounds of expense or because the water has never given any trouble before. Enteroviruses have been isolated from water very frequently in the last five years, and in general they are more resistent to chlorine than are bacteria. Once chlorination apparatus is installed, it is a solemn duty to see that it operates effectively at all times. People trust their public water supply and nothing should disturb that confidence.

Maryborough contributed 32 notifications, but there must have been many more cases than this because the suburb of Granville (population 1,500) had 21 cases, of whom 9 were school children. The first case was a boy aged 16 years who was at school until he went to Hervey Bay on 21st December. He became ill about 4th January, but none of the boys with whom he camped developed hepatitis, so he may not have been infected while at Hervey Bay. Of the next 5 patients, 4 lived in the same street as the first patient, while the fifth lived a few houses away in another street. Most of them visited the first patient when he was

sick, as did two patients living opposite who became sick on 31st January. Cases continued to occur until June, 1962, but all lived within three blocks of the first patient. Here the method of spread was probably by droplet or by direct contact. There was no common milk supply. Although the city water supply was chlorinated, it had only recently been reticulated in Granville, and most houses had rain water tanks for domestic use. The suburb is entirely residential, and sanitation throughout was very good except for some drainage problems from household wastes. The mode of introduction and spread of this little outbreak remain quite speculative.

Table XII. shows the age distribution of patients notified during the year and also during other years. School children and young adults account for more than 50 per cent. of all notifications, and the risk of infection declines sharply in middle and old age.

TABLE XII

SHOWING AGE DISTRIBUTION OF HEPATITIS NOTIFICATIONS IN 1961-62, AND IN OTHER YEARS (INCLUDING 1961-62)

Age Group	Expected Percentage*	1961–62		1958–59 to 1961–62	
		Number	Percentage	Number	Percentage
0– 4 years ..	11·0	26	2·5	111	3·2
5–14 years ..	20·3	323	30·5	1,225	34·9
15–24 years ..	14·6	242	22·8	693	19·7
25–39 years ..	19·5	293	27·6	949	27·0
40 years and over	34·5	163	15·4	453	12·9
Age unstated ..	..	13	1·2	82	2·3
	99·9	1,060	100·0	3,513	100·0

* Percentage age distribution of Queensland population (1961 Census).

LEAD POISONING

This condition is diagnosed more frequently here than in any other State and this reflects the widespread publicity given to lead poisoning for more than 60 years when Dr. Jefferis Turner and Dr. J. Lockhart Gibson recognised the clinical syndrome in children. The symptoms then were very severe.

Although paint containing more than 5 per cent. of lead has not been used in Queensland since 1922, and has now been totally banned on buildings, a large number of old timber houses still have the original lead paint applied more than 40 years ago. To-day this paint is peeling and powdery, and it is the usual source of poisoning in children. During the year, 18 notifications were received of which 12 were in children under the age of five. Five of these lived in Townsville, 3 in Brisbane, 3 in Rockhampton, and 1 in Charters Towers. All had a history of contact with old paint. Many of the patients appeared to belong to migrant families, who may not have been aware of the risks of old lead paint.

LEPTOSPIROSIS

During the year, 115 patients with various types of leptospirosis were notified, and certain particulars concerning these are set out in Table XIII. Notifications increased in 1961-62 by 32, but the Laboratory of Microbiology and Pathology in this period diagnosed 322 patients, of whom 267 lived in Queensland. North of the Tropic of Capricorn, 103 patients were diagnosed, and the infecting leptospiras belonged to nine serotypes. South of the Tropic, 164 patients were infected with five serotypes. As usual, the principal groups involved those whose occupation or recreation brought them into contact with domestic animals or native animals. Only one was a canecutter—an indication of the excellent dry cutting season last year. One person with an interesting occupation was a kangaroo shooter. The largest number of patients were between 10 and 20 years of age. This is probably an indication of the immunity conferred on older age groups by previous or inapparent infections. It is interesting to record that the laboratory of Microbiology and Pathology is a World Health Organization Reference Laboratory for Leptospirosis and that in Australia there are at least fifteen serotypes of pathogenic leptospiras. This is an infection which is not confined to Queensland. It will be found wherever it is looked for, in association with animals or wet soil.

TABLE XIII

SHOWING GEOGRAPHICAL LOCATION ACCORDING TO STATISTICAL DIVISIONS AND AGE GROUPS OF PATIENTS WITH LEPTOSPIROSIS NOTIFIED DURING 1961-62

Statistical Divisions	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70 and over	Unknown	Totals	In Hospital	Not in Hospital	Males	Females
Metropolitan	..	3	1	1	3	..	1	..	1	10	4	6	10	..
Moreton	2	20	8	6	4	1	1	..	1	43	25	18	39	4
Maryborough	..	2	1	2	3	..	..	..	..	8	5	3	8	..
Downs	..	1	1	2	2	..	..	..	..	6	3	3	6	..
Roma	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Western	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rockhampton	..	3	..	1	2	..	..	..	..	6	1	5	5	1
Central Western	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Far Western	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mackay	..	1	1	..	..	..	..	..	..	2	1	1	2	..
Townsville	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cairns	..	10	9	13	5	1	..	1	1	40	32	8	37	3
Peninsula	..	..	..	..	..	..	..	..	..	..	..	..	..	..
North Western	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Outside Queensland	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	2	40	21	25	19	2	2	1	3	115	71	44	107	8

MALARIA

Notified cases increased from 33 in 1960-61 to 44 during this year. All except two were infected during this year. All except two were infected outside Australia. The two infected in Australia lived on Boigu Island, in the Torres Strait, which has fairly frequent contacts with New Guinea.

MENINGITIS

All types of meningitis were made notifiable in 1960. Up till then, only meningococcal meningitis was notified. This has resulted in an increase in 20 notifications over 1960-61, but the increase is not significant. The age distribution of the 54 patients was as follows:—Under 1 year—19; 1 to 4 years—3; 5 to 14 years—16; 15 years and over—16. Of these, 22 lived in the Greater Brisbane area, 5 lived at Caloundra, but the others were distributed throughout the State. Meningitis was once a dreaded disease, but apart from the fulminating case, which is fatal in a matter of hours, modern drugs effect a rapid cure of most types, once diagnosis has been established.

ORNITHOSIS

The psittacosis virus, first isolated from parrots, has now been shown to belong to a group of viruses, called the ornithosis-lymph granuloma venereum group, which have a wide distribution in birds. Parrots, finches, ducks, sea birds, turkey and poultry can harbour one of the viruses of this group. Some birds die, some become sick and recover, while many birds appear to develop inapparent infections from strains of low virulence. The significance of these findings for humans who contact these birds is not yet clear. Certainly poultry processers in this State are exposed to infection, and a survey carried out during the year in 200 Brisbane poultry abattoir workers (see report of Laboratory of Microbiology and Pathology) showed that 35 (17·5 per cent.) had complement fixing antibodies to the virus group in a titre of 1 in 8 or more. Only a few of these had had influenza like illness, and this appeared to occur principally in those who had been working in the industry for only a year or two. The others had inapparent infections. This is not a new disease, nor is it one to cause alarm. However, the rapid growth of the poultry processing industry has caused

more cases to appear than formerly. Some allied viruses in sheep and cattle may also be capable of provoking antibody formation in man, while non-specific urethritis in males seems to have the same effect. This interesting disease group is well worth continued study.

POLIOMYELITIS

During the year, the highest number of notifications of poliomyelitis, since the commencement of the Salk Vaccination Campaign in 1956, was received. All cases notified were checked by obtaining a special clinical report and the examination of faecal and serum samples. The reports and the results of virus isolations from the faecal samples, and antibody titre levels from the serum samples were considered by a special Poliomyelitis Surveillance Committee set up by the National Health and Medical Research Council. Of 266 notifications received, the committee has confirmed the diagnosis in 153 cases; it regarded 87 cases as not being poliomyelitis and a decision is awaited on 26 notifications. Of 153 confirmed cases, 129 cases were paralytic, and 24 non-paralytic. Some of these were persons who had received Salk vaccine.

Recent developments in virus isolation techniques have permitted a more exact diagnosis and have helped in the study of the epidemiology of the disease. Type III poliovirus was isolated from 87 of the confirmed cases and Type I from only two cases. The epidemic was therefore regarded as a Type III epidemic. In passing, it is interesting to note that at the same time New South Wales was experiencing a Type I epidemic. The first cases of Type III came from Townsville where two cases were diagnosed at an interval of three months in March and June, 1961, respectively. The real epidemic started however in Brisbane where the first case was reported from Sandgate. During the winter and spring months of 1961, the epidemic smouldered along in Brisbane and then in November there was a significant rise. About this time cases were reported from Ipswich also and the epidemic spread to the Darling Downs and the Maranoa district. In January and February the cases came from all parts of the State.

Sudden Rise and Fall of the Epidemic

In the major epidemic of 1950-51 when cases were notified, a high incidence continued right into autumn, and April and May, 1951, saw the epidemic still at its height. The present epidemic was notable for its sharp rise and fall in the number of cases. November (29 notifications) saw the rise in incidence; in December (78 notifications) and January (69), the epidemic reached a peak; in February (28) a waning of incidence was noted.

The cause of this more sudden ending of the epidemic, with a reduction in the number of cases, is speculative, but two factors may have been operating. During this epidemic, unlike that of 1950-51, the majority of our population had been vaccinated. This in itself, reduced the number of susceptible persons. In fact the epidemic commenced at a time when there was an unfortunate hold-up in the manufacture of Salk vaccine which necessitated many young children waiting for protection. It may or may not have been coincidence that the epidemic waned with the resumption of vaccination.

In January, 1962, Coxsackie B4 virus was isolated from cases with a poliomyelitis-like illness. It is well known that one enteric virus may interfere with another and it is possible that the presence of the Coxsackie virus in the community interfered with the dissemination of the poliomyelitis organism.

Age Groups

Poliomyelitis, as its former name of infantile paralysis denotes, was originally a disease of young children and it still is in undeveloped countries, where hygiene is poor. In these latter countries, young children are exposed to frequent small doses of the virus and the resultant subclinical infection produces an immunity. In the more developed countries, this opportunity of acquiring immunity is not available and many of us reach adulthood with no immunity unless artificially acquired by vaccination.

It is interesting to compare the distribution of cases in the various age groups in the present epidemic with the 1950–51 epidemic. This is done in Table XIV. It will be noted that the proportion of cases over 20 years is approximately the same in each epidemic, but there has been a redistribution in the younger age groups. In 1950–51, the highest proportion of cases came from the 5–9 age groups but there was still a fairly even spread in other three five-year groups under twenty years. In this present epidemic, the percentage of cases coming from the age group 0–4 years was double that of the 5–9 years incidence, and the incidence in the 10–19 years was relatively slight. The high incidence in the under fives may be explained by the fact that the vaccination rate here was low and this group is notorious as the greatest disseminators of the organism in the community. The 10–20 years group was fairly well protected artificially; some of them have no doubt acquired immunity by subclinical exposure and they are not usually a group in which the organism is widely disseminated.

The Effect of Salk Vaccine

When Salk vaccine was introduced, no claim was made that it would give complete protection to everyone. However, from the time of its introduction till this present epidemic, there had been no evidence of any loss of protection in Queensland people who had received what had been regarded as a complete course of three injections. There were eight cases in triply vaccinated persons in Tasmania and Victoria during 1960–61 and experimental work indicated that Type III was the least effective antigen of the C.S.L. Salk vaccine. It is therefore not surprising that some of the cases in Queensland occurred in persons who had been vaccinated. The number of paralytic cases occurring in such people is given in Table XV. Altogether forty-two paralytic cases had received three injections.

Despite this, Salk vaccine did give very good protection during the epidemic. Two methods of analysis have shown that this is so. Firstly, by comparing the attack rate in the vaccinated and non-vaccinated, the protection rate for all ages up to fifty years in Queensland was over seventy per cent. Secondly, the degree of paralysis was less in those who received Salk vaccine (Table XVI). Of five deaths, four occurred in adults who had received no injections. The other death occurred in an eight-month-old baby who had received two injections. There were no deaths in people who had received three injections. Only seven people who had received three injections were reported to be severely paralysed, whereas in addition to the deaths already mentioned, a much higher proportion was severely paralysed in those persons who had received no injections.

In United States, Canada and England where Salk vaccine has been used extensively, authorities have advocated a fourth injection. Prior to this Queensland epidemic, three injections of Australian vaccine were considered sufficient, but the number of cases in triply vaccinated persons, although not high, was enough to indicate the necessity of a fourth dose. As a result of Queensland's representations, the National Health and Medical Research Council has now recommended a fourth injection of Salk vaccine, twelve months or more after the third injection has been administered.

In many overseas countries an oral vaccine is being used, but before its introduction on a wide scale in Australia, further experimental work will be carried out.

TABLE XIV

COMPARING THE INCIDENCE OF CONFIRMED POLIOMYELITIS CASES IN THE VARIOUS AGE GROUPS IN THE 1950–51 AND 1961–62 EPIDEMICS

Age Group in Years	1950–51		1961–62	
	Number of Cases	Percentage of Total	Number of Cases	Percentage of Total
0– 4	246	20·97	65	42·5
5– 9	284	24·23	31	20·0
10–14	178	15·19	11	7·2
15–19	172	14·65	5	3·3
20–24	120	10·23	15	9·8
25–29	85	7·25	10	6·5
30–34	47	4·0	8	5·2
35–39	23	1·96	5	3·3
40–44	4	0·34	1	0·7
45–49	8	0·68	1	0·7
50–54	3	0·25	..	..
55–59	3*	0·25	1	0·7

*55 years and over

TABLE XV

ANALYSIS OF 129 PARALYTIC POLIOMYELITIS CASES ACCORDING TO AGE GROUPS AND NUMBER OF INJECTIONS

Age Group in Years	Nil Injections	One Injection	Two Injections	Three Injections	Total
0– 4 ..	26	3	8	16	53
5– 9 ..	9	..	1	16	26
10–14 ..	1	..	1	6	8
15–19 ..	2	..	..	..	2
20–24 ..	9	1	1	3	14
25–29 ..	9	..	..	1	10
30–34 ..	7	..	1	..	8
35–39 ..	5	..	..	..	5
40–44 ..	1	..	..	..	1
45–49 ..	1	..	..	..	1
50–54 ..	..	..	..	..	..
55–59 ..	1	..	..	..	1
All Ages	71	4	12	42	129

TABLE XVI

DEGREE OF PARALYSIS IN RELATION TO NUMBER OF INJECTIONS IN 129 PARALYTIC POLIOMYELITIS CASES

Number of Injections	Degree of Paralysis				Total
	Mild	Moderate	Severe	Death	
0 ..	22	24	21	4	71
1 ..	..	4	..	..	4
2 ..	4	6	1	1	12
3 ..	19	16	7	..	42

As in previous years, most of the notified patients were meat workers or persons who had contact with domestic and native animals. The highest incidence is in the younger age groups, indicating probable immunity conferred by occupational exposure to Q. fever. The disease continues to occur in the sheep raising areas of the State and there is little doubt that the kangaroo tick, *Amblyomma triguttatum,* is the chief vector. The distribution of this tick in Australia has been defined by the Commonwealth Scientific and Industrial Research Organization, and it is safe to predict that Q. fever will be found wherever this tick is known to be present. During the current year, 12 patients living in New South Wales and 7 in South Australia were diagnosed by the Laboratory of Microbiology and Pathology, and this must represent merely a fraction of the true number which occurred in other States.

STAPHYLOCOCCAL WOUND INFECTION IN HOSPITALS

As outlined in the report of the Laboratory of Microbiology and Pathology, a survey of wound infections at Princess Alexandra Hospital which began in October, 1960, was completed in August, 1961, but in November and December, 1961, a special survey of infection following gastrectomy and cholecystectomy was carried out. Both of these operations can be classed as potentially infected, but in addition the staff as well as the patients were checked for infection. Patients had swabs taken from the nose, perineum and the operation site on the skin, while the staff had nasal culture only. About half of the staff and half of the patients were infected with coagulase positive staphylococci prior to operation. In spite of this, only 9 per cent. of the wounds showed grade III infection (breakdown of wound or discharge of pus), and in these neither patient nor theatre staff were found infected pre-operatively. The source of infection in these patients is unknown.

In March, 1962, a wound survey was commenced at the Brisbane General Hospital. The incidence of severe infection so far has been unexpectedly low, but it is too early yet to draw conclusions.

TAENIASIS

Tapeworm infestations of all kinds were made notifiable in 1960, but no notifications were received until this year. One of the notifications was of *Taenia solium* (pork tapeworm) in an Italian who probably contracted the infestation outside Australia. This is a dangerous tapeworm because of the risk of cysticercosis through spread of the larvae in the human body. The complete worm was removed before the patient was discharged from hospital.

Q. FEVER

Only 100 notifications of Q. fever were received during the year compared with 171 for 1960–61. That this does not represent a decline in incidence is seen by the diagnosis of 216 patients in Queensland at the Laboratory of Microbiology and Pathology. The reason is that the special survey carried on since 1957–58 has ceased, and doctors are not now being reminded that they should notify patients. Particulars of those notified are set out in Table XVII.:—

TABLE XVII

SHOWING GEOGRAPHIC AND AGE DISTRIBUTION OF 100 NOTIFICATIONS OF Q. FEVER, 1961–62

Statistical Division	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70 Years and Over	Age Unknown	Totals
Metropolitan	..	4	3	3	2	2	..	..	1	15
Moreton	1	7	5	2	4	2	..	..	..	21
Maryborough	..	1	4	1	4	1	..	..	..	11
Downs	..	4	1	3	3	1	..	..	1	13
Roma	..	1	..	..	..	..	..	..	6	7
South Western	..	..	..	..	..	..	..	..	..	..
Rockhampton	..	1	2	..	5	..	..	..	..	8
Central Western	..	3	..	4	..	..	1	..	..	8
Far Western	..	..	1	..	..	..	..	..	..	1
Mackay	..	..	..	1	2	..	..	..	..	3
Townsville	..	2	..	..	1	..	..	..	..	3
Cairns	1	..	1	6	1	1	..	..	..	10
Peninsula	..	..	..	..	..	..	..	..	..	..
North Western	..	..	..	..	..	..	..	..	..	..
Outside Queensland	..	..	..	..	..	..	..	..	..	..
Totals	2	23	17	20	22	7	1	..	8	100

TETANUS

Last year, I was glad to report that the incidence in children (0–14 years) which was once 50 per cent., has now declined considerably due to widespread active immunization. This trend continued during the year, as only three of the eighteen notifications were under 15 years of age. One of these children demonstrated well the great value of immunization. This boy, aged 8 years, had had four doses of triple antigen between late 1954 and 1957. He had a booster (diphtheria tetanus toxoid) in November, 1959. On 16th June, 1962, he had a penetrating injury of the right thigh. This must have contained many tetanus organisms because he developed a rigid abdomen on 20th June, after an incubation period of three days. Normally all patients die if the incubation period is so short. This boy, although definitely tetanic, "never looked like dying", to use the words of his doctor. He made a quick and complete recovery.

In a few years from now, the children of to-day will be adults, and many ex-servicemen (immunized in World War II) will be old. The incidence of tetanus, although still far too high, should continue to decline.

TRAFFIC ACCIDENT SURVEY

This is part of a survey being carried out by the Traffic Injury Research Committee of the National Health and Medical Research Council. Medical officers of the Laboratory of Microbiology and Pathology together with a full time industrial health inspector are engaged on this survey which began in January, 1962. In addition, members of a surgical unit at the metropolitan hospitals carry out the clinical part of the survey.

By arrangement with the Police Department and the Ambulance authority, the industrial inspector follows up traffic accidents involving injury to persons. Each week a list of these is forwarded, after which the police reports are perused, and the damaged vehicle is inspected. Up to 30th June, inspections were carried out on 115 vehicles, but it is obvious that quicker reporting will have to be carried out if all vehicles are to be seen before repair. From 17th January to 30th June, follow ups were made on 320 traffic accidents involving 375 deaths or injuries. Of these, about 20 per cent. were pedestrians. In a preliminary analysis of 150 consecutive accidents it was shown that 172 persons were killed or injured. Of these 26 per cent. were pedestrians, 25 per cent. were drivers, 20 per cent. were passengers, 12 per cent. were motor cyclists, 7 per cent. were pedal cyclists, 5 per cent. were motor scooter riders, 5 per cent. were pillion passengers and 1 per cent. were truck passengers. The survey will continue for at last two years.

SECTION OF AIR POLLUTION

As reported previously, a survey of air pollution in the Greater Brisbane area and in Ipswich was carried out from 1st March, 1959, to 28th February, 1960. The Air Pollution Committee drew up a report, which was tabled in Parliament in October, 1961.

The findings and recommendations in this Report are set out herewith—

RECOMMENDATIONS OF AIR POLLUTION COMMITTEE

1. That an Air Pollution Advisory Council be set up to advise the Minister on air pollution in Queensland from time to time, and that this Council, in addition to the present members of the Air Pollution Committee, should comprise representatives of the Department of Labour and Industry, the Department of Railways, the State Electricity Commission, and the Chamber of Manufactures.

Explanation

It was felt that the present Committee was not representative of fuel users, and that the enlarged Council would be in a better position to tender advice to the Minister—particularly on specific problems. If this is approved, a copy of this report should be forwarded to the parties concerned.

2. That investigation into certain aspects of air pollution should be continued.

Explanation

The pollutants which merit further continuous measurement are smoke, sulphur dioxide, oxides of nitrogen and ozone. Some of the hydrocarbons from internal and diesel combustion engines could also be estimated. In addition, deposit gauges should be used to ring certain suspected major sources of pollution, in order to measure the contribution of a particular source to the overall pollution level.

Implementation of this recommendation will need a full time chemist (already requested for 1961-62) together with certain apparatus to be selected by the Director of the Government Chemical Laboratory during his coming overseas tour.

The Committee felt that two stations should be set up—one north and one south of the river—to record the pollutants—mentioned above, together with two caravans which could be moved from one area to another. All would contain recording instruments. The growth of motor traffic could make certain other pollutants even more important than the fall-out from coal burning furnaces.

3. That the topography and climate of Brisbane are such that major pollution problems including acute incidents, are more likely to occur here than in any other city of Australia.

Explanation

Brisbane is situated with mountains and hills to the west and north-west of the city. The latitude in which Brisbane is situated is one that favours light winds and frequent temperature inversions. These factors could delay the dispersion of aerial pollutants.

4. That the Greater Brisbane Committee should be acquainted with the findings of the 1959–60 air pollution survey so that they may receive consideration when declaring new industrial or noxious trades areas or when recommending sites for new industrial establishments.

Explanation

New industrial plants or new industrial or noxious trades areas should not be situated where they will materially aggravate existing air pollution, or where polluting substances are liable to be blown by prevailing winds over major residential areas. Heavy pollution in one area can be very expensive to reduce.

5. That legislation giving power to control air pollution be enacted and implemented as soon as possible.

Explanation

The complete absence of laws or regulations to define or control air pollution makes it impossible to correct it when levels become high, as they are certain to do within the next decade. The general feeling of the Committee was that the present position demanded some degree of control, and that at the very least, the present pollution should not be allowed to increase indiscriminately.

Cabinet has considered the Report and its recommendations, and has decided that a Clean Air Bill should be prepared and presented to Parliament during 1962. This Bill is now being drafted.

In addition, the newly appointed Air Pollution Advisory Council recommended that an interstate conference be held to attempt to achieve agreement on testing methods, and that additional equipment be purchased to enable the Government Chemical Laboratory to undertake further measurements of air pollution.

There is no doubt that the legislation, when implemented, will minimize greatly the threat to human health and comfort which is presented by uncontrolled emission of effluents into the air of our major cities.

Tables XVIII, XIX, and XX show some of the pollution measurements recorded during the course of the survey.

TABLE XVIII

AIR POLLUTION SURVEY—SMOKE DENSITY MEASUREMENT 1960
(COH units per thousand linear feet)

Mean—are 24 hour readings averaged over the calendar month
Maximum—are the highest daily reading in the calendar month

Location	Result	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Toowong	Mean ..	0·5	0·7	0·8	0·9	0·8	1·1	0·8	1·3	1·0	0·8	0·6	0·4
	Maximum	1·2	1·6	1·7	1·9	2·3	2·3	1·7	2·7	2·1	1·6	1·3	1·2
Oxley	Mean ..	0·6	0·8	0·9	..	..	..	..	..	..	..	..	..
	Maximum	1·9	2·1	2·3	..	..	..	..	..	..	..	..	..
Yeronga	Mean ..	0·6	0·8	0·9	1·0	1·3	1·4	1·2	1·7	..	..	..	..
	Maximum	1·5	2·8	1·8	2·3	3·0	2·5	2·5	2·8	..	..	..	..
South Brisbane	Mean ..	1·1	0·9	0·8	1·4	1·2	1·5	1·4	1·9	1·5	1·4	..	..
	Maximum	2·2	1·7	1·7	2·9	3·0	3·0	3·0	3·4	2·5	2·6	..	..
Chermside	Mean ..	0·5	0·5	0·6	0·6	0·6	0·9	0·7	0·8	0·7	0·6	0·3	0·3
	Maximum	1·4	1·1	1·3	1·3	1·5	1·9	1·4	1·8	1·4	1·2	0·8	0·8
Eagle Farm	Mean ..	..	..	..	..	..	..	..	..	..	..	0·4	0·4
	Maximum	..	..	..	..	..	..	..	..	..	..	1·0	1·1

TABLE XIX

AIR POLLUTION SURVEY—AVERAGE SOLUBLE DEPOSIT OVER ONE YEAR IN BRISBANE AND IPSWICH
MARCH, 1959—FEBRUARY, 1960

Results expressed in tons/square mile/30 days

Location	Soluble Matter	Salt NaCl	Soluble Matter Not Salt	Sulphates as H_2SO_4
Woolloongabba	4·9	1·1	3·8	1·1
Petrie Terrace	5·2	1·2	4·0	1·1
Mayne	4·8	1·1	3·7	0·9
Grange	5·3	1·1	4·2	0·9
Toowong	3·7	1·0	2·7	0·5
Yeronga	4·3	0·9	3·4	0·8
Holland Park	4·0	1·1	2·9	0·6
Morningside	4·4	1·1	3·3	0·6
Oxley	4·7	1·1	3·6	0·8
Sherwood	5·5	1·0	4·5	1·0
Rocklea	4·7	1·0	3·7	0·8
Camp Hill	4·9	1·3	3·6	0·7
Murarrie	4·3	1·2	3·1	0·5
Eagle Farm	5·6	1·5	4·1	1·1
Nundah	6·1	1·4	4·7	1·1
Geebung	5·2	1·4	3·8	0·8
Chermside	3·8	1·0	2·8	0·8
Mitchelton	4·4	0·9	3·5	0·7
Ipswich	3·2	0·6	2·6	0·7
Silkstone	3·1	0·7	2·4	0·7

TABLE XX

AIR POLLUTION SURVEY—AVERAGE DEPOSIT OVER ONE YEAR IN BRISBANE AND IPSWICH
MARCH, 1959, TO FEBRUARY, 1960

Results expressed in tons/square mile/30 days

Location	Insoluble Solids	Combustible Matter	Ash	Soluble Matter
Woolloongabba	13·9	4·0	9·9	4·9
Petrie Terrace	7·4	2·5	4·9	5·2
Mayne	7·9	2·5	5·4	4·8
Grange	5·7	1·7	4·0	5·3
Toowong	5·3	1·8	3·5	3·7
Yeronga	7·7	2·0	5·7	4·3
Holland Park	6·5	1·7	4·8	4·0
Morningside	8·5	1·9	6·6	4·4
Oxley	6·4	1·7	4·7	4·7
Sherwood	6·2	2·5	3·7	5·5
Rocklea	6·4	1·7	4·7	4·7
Camp Hill	6·5	1·8	4·7	4·9
Murarrie	9·9	2·3	7·6	4·3
Eagle Farm	9·9	2·5	7·4	5·6
Nundah	7·9	4·0	3·9	6·1
Geebung	9·0	1·7	7·3	5·2
Chermside	8·9	1·9	7·0	3·8
Mitchelton	10·5	2·3	8·2	4·4
Ipswich	8·2	1·9	6·3	3·2
Silkstone	4·0	1·4	2·6	3·1

HANSEN'S DISEASE

(1) HANSEN'S DISEASE IN THE WHITE POPULATION

Medical Supervision: M. H. Gabriel, B.Sc., M.B., B.S. (Q'ld), A.R.A.C.I., Health Officer, Health and Medical Section.

1961–62 can be regarded as yet another successful year in the management of Hansen's disease in this State since the year closed with but four active white patients in hospital. As in the past several years all of the cases admitted have been "missed" cases in the sense that they have exhibited vague signs and symptoms for many years, but the true nature of their illness was not recognised until some more definite sign or symptom showed up. It is pleasing to note that no new infections appear to be occurring, and it is especially pleasing to note that despite the falling numbers of cases being detected there is an awareness that the diagnosis of Hansen's disease should be considered in patients with vague neurological or dermatological signs and symptoms.

TABLE XXI.

Comparison of Statistics for the Financial Years 1959–60–61–62

	1959–60			1960–61			1961–62		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals
Population at 1st July ..	11	3	14	3	3	6	3	3	6
Admitted	1	1	2	2	..	2	2	2	4
Discharged	3	..	3	1	..	1	..	..	..
Allowed Home Isolation ..	5	..	5	1	..	1	2	1	3
Died	1	1	2	..	..	..	..	..	..
Population at 30th June ..	3	3	*6	3	3	*6	3	4	*7

* These totals include three patients given special permission to remain in hospital although eligible for discharge.

ADMISSIONS

The two male patients admitted were both in their sixties and both showed evidence of having suffered from Hansen's disease for many years. One patient was fairly advanced while the other showed only minimal signs. The latter gave a history of exposure in China and in the absence of a history of exposure in Queensland it is assumed that this cannot be regarded as a local case. Of the two females, one was of quite advanced years and had been treated for a variety of complaints over many years. Signs of Hansen's disease were not prominent but had been present for several years before being correctly identified. The other female was seventeen years of age and although signs had been present for a considerable time they were minimal and her detection really rested on her relationship to known cases within her family.

RELEASES

Two males and one female were allowed home isolation after having made satisfactory clinical progress and after greatly improved tests for *Mycobacterium leprae*. They have continued to make excellent progress.

DRUG TREATMENT

Two white males, one aged 50 years and one aged 63 years were treated at Princess Alexandra Hospital, South Brisbane, with a combination of drugs according to the following plan:—

First, second and third weeks—100 milligrams of Dapsone twice a week

Fourth, fifth and sixth weeks—200 milligrams of Dapsone twice a week

Seventh, eighth and ninth weeks—300 milligrams of Dapsone twice a week

Tenth and subsequent weeks—400 milligrams of Dapsone twice a week

Fifteenth week—"Etisul" (diethyl dithiolisophthalate) was added at the rate of 2·5 grams of the cream innuncted into the skin twice a week. "Etisul" was continued throughout the course of treatment in 12-week courses with a 12-week break between courses.

Nineteenth week—Methimazole was added to the treatment according to the following schedule:—

First week—10 milligrams daily
Second week—20 milligrams daily
Third week—30 milligrams daily
Fourth week—40 milligrams daily

and 40 milligrams a day was continued for the remainder of the period of hospitalisation.

The 50 year old patient was hospitalized for 56 weeks including 38 weeks on Methimazole. The 63 year old patient was hospitalized for 51 weeks including 33 weeks on Methimazole.

In both cases clinical improvement was remarkable. *Case One* showed complete recovery of a bilateral foot drop and the complete disappearance of all nodulation, infiltration and pigmentation; in addition there was a profound improvement in the anaesthesia of the hands, arms, feet and legs. *Case Two* showed similar improvement. In both cases the disease had been present for over five years and with Dapsone above would, in my opinion, have taken at least two and a half years to achieve the same result.

One remarkable feature was that neither case showed any sign of a "lepra" reaction or a erythema nodosum leprosum.

Blood examinations were made every two weeks and *Case One* maintained a haemoglobin varying just above and below 15 grams per 100 ml without the exhibition of any haemoltinics. *Case Two* required iron only in the form of ferrous gluconate to maintain his haemoglobin in the vicinity of 12·5 grams per 100 ml. In both cases the white cell count remained in the range 10 to 14 thousand per cubic millimeter with a normal distribution of cell types.

Case One developed a slightly enlarged thyroid gland which was quite obvious on visual inspection but there was no sign whatever of hypothyroidism. *Case Two* did not show any thyroid enlargement or signs of hypothyroidism.

The results of bacteriological tests show quite obvious improvement over the period of treatment and are set out below:—

TABLE XXII

Month and Year	Case One		Case Two	
	Ear Lobe	Eye Brow	Ear Lobe	Eye Brow
November, 1961	+	+	..	..
December ..	+	+	..	..
January, 1962 ..	+	—	..	..
February ..	+	—	+	+
March	++	+++	++	++
April	+	—	++++	+
May	+	—	++++	++++
June	+	—	+++	++++
July	+	—	+	++++
August	+	—	+	+
September ..	++++	—	++	+++
October	+	—	—	—
November ..	—	—	+	+
December ..	++	—	++	+
January, 1962 ..	..	..	+	—
February ..	..	..	+	++

Both have been discharged to home isolation and maintained on Dapsone and Etisul. It has been considered advisable not to continue the Methimazole on an outpatient basis.

The outstanding features shown by these two cases were—

(*a*) The rapid clinical improvement
(*b*) The degree of clinical improvement
(*c*) The obvious improvement in bacteriological tests
(*d*) The freedom from "lepra" reactions and other side effects.

This is admittedly a very small series of two cases but it is of interest since the patients were whites of European extraction. This combined treatment appears to warrant further trials both in whites and coloured patients.

GENERAL

Since August 1959 all white patients have been accommodated in an annexe at Princess Alexandra Hospital, South Brisbane. All of the patients appear to have been quite happy with the change from their former isolation on an island. The change has also resulted in in-patient and out-patient facilities being available at the annexe for former patients. This has proved popular and there is seldom a vacant bed in the annexe, while out-patient clinics are well attended.

Thanks are again offered this year to the Handcraft Section of the Red Cross Society for their continuing interest in the patients and the assistance given in providing handcraft materials and training. It will be realised that some form of occupation is essential for patients who face a long stay in hospital.

(2) HANSEN'S DISEASE IN THE COLOURED POPULATION

No change has been made in the arrangements for housing coloured patients with Hansen's disease at Fantome Island near Townsville, despite the continuing fall in numbers of patients.

The following Table shows the population changes during the year—

TABLE XXIII

——	Males	Females	Total
Patients at 1st July, 1961 ..	13	4	17
Admitted	..	1	1
Discharged	5	2	7
Patients at 30th June, 1962 ..	8	3	11

It is pleasing to be able to record a further substantial drop in the number of patients at Fantome Island and to note that for the past five years there have been very few admissions.

The one admission during the year was a female with only moderate signs and symptoms.

One male patient was transferred temporarily to Brisbane for the fitting of an artificial limb.

The nursing care and general supervision remains in the capable hands of the Franciscan Missionaries of Mary, and medical supervision is maintained by Medical Officers of the Townsville Hospital. Patients are frequently transported to Townsville Hospital for specialist and other treatment.

SECTION OF ENTHETIC DISEASES

Medical Officer in Charge: GEOFFREY HAYES, M.B., Ch.M. (Syd.)

There were 1,525 cases of venereal disease notified for the 1961-62 fiscal year. This compares with 1,436 in the previous year and represents an incidence of 0·985 per thousand population as compared with 0·977 per thousand the previous year.

This represents a slight increase in the rate of incidence over the previous twelve months and also represents the peak incidence since the war and immediate post-war years.

Table XXIV dissects the incidence of notified venereal disease for the past twelve months.

TABLE XXIV

NOTIFIED VENEREAL DISEASES IN QUEENSLAND, 1961-62

——	Metropolitan		Outside Centres		Whole State		Total
	Males	Females	Males	Females	Males	Females	
Gonorrhoea—							
Unspecified	..	..	..	..	..	..	..
Acute	888	146	246	40	1,134	186	1,320
Sub-acute	1	1	7	8	8	9	17
Chronic	..	7	2	14	2	21	23
Ophthalmia	..	..	..	..	..	..	..
Vulvo-vaginitis	..	..	..	3	..	3	3
	889	154	255	65	1,144	219	1,363
Syphilis—							
Unspecified	1	2	4	3	5	5	10
Primary	7	4	2	1	9	5	14
Secondary	4	7	3	2	7	9	16
Tertiary	3	1	2	2	5	3	8
Latent	18	3	1	5	19	8	27
Neuro	..	..	2	..	2	..	2
Pre-natal (congenital)	..	1	1	..	1	1	2
	33	18	15	13	48	31	79
Soft sore	11	..	1	1	12	1	13
Venereal warts	67	1	..	..	67	1	68
Ulcerative granuloma	1	..	..	1	1	1	2
	1,001	173	271	80	1,272	253	1,525
	1,174		351		1,525		
	1,525						

Table XXV shows centres from which notifications were received in the various areas of the State outside Brisbane and shows approximately the same distribution as last year, the centres with the greatest numbers being still Thursday Island, Cairns and Townsville. New pockets this year are Chinchilla and Southport with 17 and 24 respectively, whereas last year Southport reported only one case.

TABLE XXV

Centres of Notification of Venereal Disease Outside Metropolis

Centre	Males	Females	Total
Atherton	9	1	10
Aramac	2	1	3
Ayr	1	0	1
Babinda	1	0	1
Baralaba	2	1	3
Beaudesert	1	0	1
Biloela	2	0	2
Blackall	1	0	1
Boonah	1	0	1
Cairns	45	8	53
Caloundra	1	1	2
Cherbourg	1	0	1
Chinchilla	3	0	3
Cloncurry	16	1	17
Edmonton	1	0	1
Goodna	0	1	1
Goondiwindi	1	0	1
Gordonvale	3	3	6
Gympie	3	0	3
Hughenden	2	0	2
Innisfail	4	0	4
Ipswich	1	1	2
Kingaroy	1	0	1
Laidley	1	0	1
Longreach	5	0	5
Mackay	8	1	9
Mareeba	10	4	14
Maryborough	4	2	6
Monto	1	0	1
Mundubbera	0	1	1
Murgon	1	1	2
Oakey	1	0	1
Quilpie	1	1	2
Rockhampton	14	5	19
Southport	20	4	24
Stanthorpe	1	0	1
St. George	4	0	4
Thursday Island	38	35	73
Toowoomba	3	0	3
Townsville	48	4	52
Torquay	1	0	1
Tully	1	1	2
Winton	3	1	4
Wondai	1	0	1
Woorabinda	3	2	5
	271	80	351
	351		

Table XXVI shows the varying incidence since the immediate pre-war years and the steady increase over the past 10 years.

TABLE XXVI

Showing Number of Notifications of Venereal Diseases for Past 24 Years

Fiscal Year	Notifications	Mean Population	Incidence per 1,000 Population
1939–39	1,147	1,008,207	1·127
1939–40	1,091	1,021,426	1·077
1940–41	1,328	1,032,122	1·286
1941–42	1,207	1,036,690	1·164
1942–43	3,101	1,040,433	2·98
1943–44	2,718	1,054,810	2·576
1944–45	2,391	1,068,630	2·24
1945–46	1,309	1,084,125	1·207
1946–47	1,373	1,097,303	1·251
1947–48	1,000	1,114,634	·897
1948–49	846	1,140,816	·742
1949–50	731	1,173,232	·623
1950–51	626	1,207,194	·519
1951–52	627	1,239,868	·506
1952–53	757	1,272,244	·595
1953–54	740	1,300,464	·569
1954–55	741	1,325,336	·559
1955–56	807	1,352,650	·597
1956–57	995	1,380,700	·721
1957–58	1,018	1,403,400	·726
1958–59	965	1,426,019	·676
1959–60	1,021	1,448,100	·705
1960–61	1,436	1,468,400	·977
1961–62	1,525	1,503,703	·985

Tables XXVII, XXVIII and XXIX show alleged sources of infection, marital status and groups of notified cases.

TABLE XXVII

Alleged Sources of Infection

Non-professional	1,011
Unknown	350
Not Stated	94
Professional	44
Husband	14
Wife	11
Mother	1
Total	1,525

TABLE XXVIII

Marital Status of Patients

—	Males	Females	Total
Single	1,064	172	1,236
Married	145	62	207
Separated	48	4	52
Widowed	11	8	19
Divorced	2	3	5
Not Stated	2	4	6
Total	1,272	253	1,525

TABLE XXIX

Showing Age Group of Notified Cases

Age Group	Males	Females	Total
Under 1 year	2	1	3
1– 5 years	..	..	..
6–10 years	..	2	2
11–15 years	..	5	5
16–20 years	406	132	538
21–25 years	382	42	424
26–30 years	178	23	201
31–35 years	115	13	128
36–40 years	62	14	76
41–45 years	50	6	56
46–50 years	27	3	30
51–55 years	12	1	13
56–60 years	8	0	8
61–65 years	9	0	9
Over 65 years	3	0	4
Unknown	17	11	28
Total	1,272	253	1,525

Table XXX shows the sources from whence notifications were received, 14·2 per cent. coming from private practitioners as compared with 11·3 per cent. last year.

TABLE XXX

Showing Sources of Notification

—	Males	Females	Females
Private Doctors—			
Brisbane	53	10	63
Outside Centres	129	24	153
Total	182	34	216
Clinics—			
Brisbane	909	148	1,057
Outside Centres	20	4	24
Total	929	152	1,081
Hospitals—			
Brisbane	39	15	54
Outside Centres	122	52	174
Total	161	67	228
Total All Sources	1,272	253	1,525
	1,525		

AD HOC VENEREAL DISEASES CLINICS, BRISBANE

Confidential treatment of venereal disease is provided at every public hospital in the State but in addition the Department of Health provides two Ad Hoc Clinics, one for Males and one for Females.

In my Report last year I pointed out the opportunities for research which exist in a Venereal Disease Clinic and to this end steps have been taken in the past twelve months to initiate research into the various forms of non-specific urethritis, which is becoming one of the major problems in venereology today.

The contradictory opinions existing regarding the presence of *Trichomonas* infections in males is one which has been selected for preliminary enquiry and with the help of the Laboratory of Microbiology and Pathology all cases of non-specific urethritis are being cultured for *Trichomonas* and *Monilia*.

It is hoped later to extend this activity to cultures for P.L. bodies which are alleged to occur in at least 30 per. cent of cases of non-specific urethritis. In addition a preliminary survey of routine blood tests taken at the Clinic shows a considerable proportion reacting to the complement fixation tests for the larger rickettsial infections of the lymphogranuloma type.

It is hoped that these various investigations will help to throw some light upon the various factors included in the "asylum ignorante" of non-specific urethritis.

The following tables record the activities of the Male and Female Ad Hoc Clinics, and the latter includes also the patients treated in the Female Section of the Brisbane Prison.

TABLE XXXI

MALE CLINIC—COLCHESTER STREET

New Cases—	
Total for the year	1,747
Highest Month—October	179
Lowest Month—June	112
(Average per month)	145.4
Visits—	
Total for the year	14,502
Highest Month—January	1,575
Lowest Month—December	920
(Average per month)	1,208.5
Notifications—	
Early Syphilis—	
Primary	7
Early Secondary	..
Early Latent	12
Total	19
Late Syphilis—	
Late Latent	4
Acute Gonorrhoea	808
Venereal Warts	67
Soft Sore	11
Total Notifications	909
Injections—	
Penicillin	1,705
Streptomycin	61
Total	1,766
Investigations—	
Dark Ground Tests	27
Smears Examined at Clinic	5,316
Smears Submitted to Laboratory	1,463
Blood Tests Submitted to Laboratory	2,536
Urine Tests Submitted to Laboratory	196
Total	9,538
Prophylactic Treatments	1,167
Letters to Defaulters	255

TABLE XXXII

WOMEN'S CLINIC—WILLIAM STREET

NOTIFICATIONS

—	Women's Clinic	H.M. Prison	Total
Gonorrhoea—			
Acute	121	12	133
Chronic	4	2	6
Treated	1	..	1
	126	14	140
Syphilis—			
Primary	1	1	2
Secondary	1	1	2
Early Secondary	2	..	2
Late Primary	1	1	2
Latent	1	..	1
	6	3	9
Total	..	..	149

TABLE XXXIII

OTHER ACTIVITIES

—	Women's Clinic	H.M. Prison
Total Interviews	741	..
New Cases	291	..
Penicillin Injections	252	54
Smears taken	938	378
Bloods taken	297	108
Patients cultured	198	..
Cultures taken	413	..
Dark Ground	4	..
Trichomonas	12 (treated)	..
Monilia	20 (treated)	..
Prisoners examined	..	184

SECTION OF FOOD AND DRUGS

FOOD

Work carried out by this section covered all duties in regard to the relevant sections of the Health Acts and regulations made thereunder.

In all parts of the State inspectors gave particular attention to the quality of milk sold to the public and the year's activities resulted in an increased number of samples, both official and unofficial, being submitted for analysis. Details of these chemical analyses will be found in the report of the Government Chemical Laboratory. As a result, eight prosecutions for the sale of adulterated milk were successfully undertaken, resulting in the inflicting of £129 12s. in fines and £27 18s. in costs.

Particular attention was given to the products of pasteurising factories and these were found in the main to achieve a high standard. The co-operation of the various managements in correcting any faults found is appreciated. Attention was also paid to the standard of vehicles, whilst all complaints in regard to milk supplies, including school milks, were promptly dealt with.

The campaign against the use of preservative by butchers in minced meat was continued, and, although the increased fines provided for second offences by recent amendments to the Health Acts had a certain salutory effect, there is still a proportion of the meat trade prepared to breach the law in this regard. The year's activities resulted in fifty-five successful prosecutions, resulting in £634 10s. in fines and £169 11s. in costs. Included in these amounts were fourteen fines of £25 and one of £50 for second offences. The maximum adulteration found was at the rate of 15·7 grains of preservative to the pound, whilst the average adulteration was found to be at the rate of 4·7 grains to the pound. I am strongly of the opinion that if minced meat cannot be sold because of deterioration without preservative, it is equally unfit for sale with preservative. The trade should rely more on refrigeration and on better handling of meat.

Many samples of sausages were taken and examined. Details of these will be found in the report of the Government Chemical Laboratory. As a result of sampling, four prosecutions for excess preservative and/or meat deficiencies were successfully undertaken with the securing of £30 in fines and £11 14s. in costs.

Close attention was given to the bread sold to the public and a large range of samples from all parts of the State was analysed. Generally bread was found to be of fair average quality but it was necessary to institute legal proceedings against some bakers for failure to comply with prescribed standards. As a result of four successful prosecutions, £33 in fines and £14 5s. in costs were imposed. One prosecution for a similar offence was dismissed by the presiding magistrate.

The standard of spirits sold was not overlooked and spirits were regularly tested. As a result of these inspections, one licensee was successfully prosecuted on two charges of selling adulterated rum and was fined a total of £30 and ordered to pay £11 18s. costs. Another complaint for a similar offence was dismissed by the presiding magistrate.

Inspections were continually made of glass-washing facilities, whilst offenders in respect of the clean glass provision were suitably dealt with. As a result of thirty-six prosecutions undertaken in regard to failure to provide clean glasses and failures to provide efficient glass washing machines, a total of £137 2s. in fines and £69 13s. in costs was inflicted by magistrates. I wonder how much longer it will take for licensees to observe the law that every customer must be served with a clean glass for each drink.

Coconut arriving from overseas was sampled at intervals and all samples proved to be bacteriologically satisfactory. It would appear that approaches by the Commonwealth Government to the producing country have resulted in a much higher standard of hygiene at factories in Ceylon.

All other aspects of food manufacture received regular attention from the staff and, where necessary, structural alterations were required and effected. Unofficial check samples of various foods were submitted for analysis and are detailed in the report of the Director of the Chemical Laboratory. Where remedial action was indicated by the analyses, this was taken. Advice was given to the trade on packing and labelling and all complaints were promptly investigated.

As a result of inspections and complaints a number of other prosecutions was successfully launched. These resulted in eleven persons being convicted and fined a total of £80 and ordered to pay £25 19s. in costs. Officers also supervised the destruction of 34 tons 10 cwt. and 6 lb. of various deteriorated and adulterated foods, together with 190,525 cigarettes and 5 cigars.

Inspectors at the South Brisbane Fish Markets kept their usual close check on fish being offered for sale both there and at retail shops and 58 tons 17 cwt. 1 qr. and 20 lb. of fish were found unfit for human consumption and were destroyed. In addition, 3 bags of oysters, 3 mud crabs and 2,024 sand crabs were similarly treated. District officers also seized and destroyed 1 ton 14 cwt. and 24 lb. of unsound fish.

The Chief Inspector has attended conferences, under the aegis of the Commonwealth Health Department, with a view to securing uniformity of food standards. Success is being consistently attained gradually at these conferences and the ultimate goal of uniform food standards throughout the various States of the Commonwealth is now much closer than a decade ago.

Close liaison with other Government Departments and with the Brisbane Milk Board has been maintained during the year.

POISONS

Supervision of poisons and drugs increases each year with the large number of new poisons and drugs coming on to the market. Inspections of warehouses and premises of licensed dealers in poisons have been continually carried out and remedial action taken. Chemists' premises are regularly visited and care taken to ensure full compliance with the requirements of the Poisons Regulations. Where faults were found, the necessary instructions for correction were given and in practically all instances the desired result was obtained. It was, however, found necessary to prosecute one chemist for continuing breaches and four successful charges resulted in the securing of £27 in fines and £4 16s. in costs. Members of professions subject to compliance with the provisions of the Poisons Regulations, were also visited while inspections, especially in regard to transactions in dangerous drugs were continually carried out at public hospitals, private hospitals and institutions. Generally, conditions were found to be satisfactory.

Close scrutiny of labelling of poisons and drugs was continued and, although all are not yet completely correct, this is being steadily attained. In this regard, difficulties have been encountered because of the fact that other States have not yet adopted the principles of labelling and schedules, agreed upon by all States as being desirable. However the imminent gazettal of law covering this by at least one major State and its very close consideration by the other States should result in a decided acceleration in compliance by packers.

The Chief Inspector has attended conferences on the allocation of new drugs into their proper schedules and on the advertising of drugs. Uniformity in these matters would be a very big step forward in the control of poisons and drugs in the various States, and, in addition, would materially assist industries which market interstate.

DISPENSARY REGULATIONS

After a considerable period of investigation and discussions with interested parties, Dispensary Regulations were gazetted during the year. They provide for a standard of premises, together with a list of apparatus, text books and reference documents, which are considered necessary for proper dispensing of therapeutic drugs. It is considered that the implementation of these Regulations will result in a high standard of dispensing in this State and their almost universal acceptance by interested parties augurs well for the attainment of this standard. Queensland is the first State to introduce pharmacy regulations.

DANGEROUS SUBSTANCES REGULATIONS

During the year a set of Dangerous Substances Regulations was gazetted. The high incidence of poisoning cases in young children by dangerous substances, commonly found in the average household but not included in poisons schedules, has been a matter of concern to this department for a number of years. Examples would be products containing kerosene or turpentine. With the purpose of reducing the incidence of these distressing accidents, it was considered that such substances should be packed in specific types of containers, as distinct from food containers, and labelled in a cautionary manner. If this were done, their availability and attraction to the young child would be greatly reduced. Generally there was a ready acceptance by interested parties and a great measure of compliance was quickly obtained. After the gazettal of the Regulations, it was felt that one of the definitions for dangerous substances was too embracing and this definition was later amended in an effort to keep the control desired over those substances only warranting control.

A southern manufacturer was apparently of opinion that the Regulations did not apply to his products or were unfair in their application. In a series of Court actions, this manufacturer opposed the Regulations but all decisions were given in favour of the Department. It is understood that an appeal to the High Court is under consideration.

It is considered that the Regulations will reduce the incidence of poisoning by such products in young children.

SECTION OF ENVIRONMENTAL SANITATION

The Director-General is responsible to the Minister for the administration of the Health Acts. These place responsibility for environmental sanitation on Local Authorities—the role of this Department being mainly supervisory. The Local Authorities employ health in pectors for field work and the distribution of these officers is as follows:—

Brisbane City Council	40
Cities and Towns	44
Shires (not in joint areas)	35
Joint Areas (more than one Local Authority)	28
Total	147

NIGHTSOIL DISPOSAL AND REMOVAL

The pan system for collection and removal of nightsoil is still widely used throughout the State, despite the increase in sewerage. This old established system is generally well carried out and the nightsoil is usually safely disposed of by burial.

Progress is being made in sewering rural areas, while many extensions to existing schemes are being made. More Local Authorities are investigating the possibility of constructing sewage disposal systems.

REFUSE COLLECTION, REMOVAL AND DISPOSAL

This is one phase of environmental sanitation in which there is room for considerable improvement. While most Local Authorities collect and remove the refuse satisfactorily, there are still some who do not remove the refuse unless the householder places the bin on or near the footpath on the day appointed for its removal. This results in far too many services being missed.

The disposal of the refuse in too many instances is dependent on mechanical equipment from road works being made available to consolidate and cover the refuse, usually about once or twice a year. This results in the refuse being left open for flies to breed, and for rats to feed—it is bad sanitation practice.

RODENT CONTROL

Local Authorities pay attention to the rat-proofing of buildings while some also make a free supply of baits available. Most Local Authorities on the seaboard employ rodent control officers and Table XXXIV shows the number of rats killed.

TABLE XXXIV

SHOWING NUMBER OF RODENTS DESTROYED IN COASTAL CITIES 1961-62

City	Rats	Mice
Brisbane	50,574	5,104
Bundaberg	263	..
Cairns	1,171	410
Gympie	154	..
Ipswich	716	..
Mackay	1,410	689
Maryborough	224	..
Rockhampton	946	..
Townsville	1,079	..
Total	56,537	6,203
Total all rodents 1961–62		62,740
Total all rodents 1960–61		53,315
Total all rodents 1959–60		59,532

MOSQUITO ERADICATION

Many Local Authorities adopt temporary measures of mosquito control, such as larviciding, until permanent measures can be implemented. There is a subsidy payable on works which will permanently eradicate mosquito breeding places. Subsidies approved for Mosquito Eradication Purposes 1961-62 amounted to £35,490.

CAMPING AREAS AND SEASIDE RESORTS

Inspections by departmental officers show that most, but not all, Local Authorities are now providing, at camping areas, facilities superior to the minimum requirements of "The Camp Regulations of 1949."

WATER SAMPLING

This Department has continued to supply Local Authorities and others with the necessary bottles for the collection of samples of water for chemical analysis and bacteriological examination, and to receive them on arrival, at any hour, in Brisbane.

Two hundred and sixty-eight samples were received for chemical analysis and 327 for bacteriological examination during the year.

The survey of the Brisbane River for dissolved oxygen was continued and Table XXXV shows the results to 30th June, 1962.

TABLE XXXV

DISSOLVED OXYGEN—BRISBANE RIVER EXPRESSED IN PARTS PER MILLION

Month Sample Taken		William Taylor Bridge			William Jolly Bridge			Hamilton		
		North Bank	Middle	South Bank	North Bank	Middle	South Bank	North Bank	Middle	South Bank
July, 1961	Top	8·45	10·15	7·2	..	..	..	..	..	..
	Bottom ..	7·1	7·25	7·2	..	..	..	..	..	..
August, 1961	Top	..	..	..	7·3	8·85	6·8	6·2	6·25	4·75
	Bottom ..	..	..	..	5·6	5·55	5·35	4·95	8·7	5·6
September, 1961	Top	8·95	8·6	8·75	..	..	..	..	..	..
	Bottom ..	8·85	8·7	8·7	..	..	..	..	..	..
October, 1961	Top	..	..	..	7·45	8·35	4·3	3·0	3·0	3·05
	Bottom ..	..	..	..	4·3	4·55	4·5	2·9	6·7	4·3
November, 1961	Top	5·75	5·95	6·05	4·2	4·55	4·35	3·65	3·7	3·75
	Bottom ..	6·15	5·55	5·7	4·15	4·9	4·25	4·45	3·6	7·6
January, 1962	Top	3·95	4·45	4·1	6·0	6·1	4·95	4·8	7·55	4·7
	Bottom ..	6·1	7·4	4·15	4·8	4·85	4·8	4·9	4·6	4·65
February, 1962	Top	4·95	5·0	4·85	2·75	4·25	3·35	5·3	5·35	4·65
	Bottom ..	5·05	7·95	5·3	3·95	4·6	2·95	5·15	7·3	4·65
March, 1962	Top	6·85	7·4	6·8	3·7	3·7	3·3	5·3	5·5	5·15
	Bottom ..	7·75	8·3	7·0	4·35	4·65	3·7	5·3	7·7	5·3
April, 1962	Top	5·7	5·7	5·9	5·4	5·5	5·3	5·7	5·7	5·25
	Bottom ..	6·3	6·75	5·9	6·05	5·75	5·35	5·85	8·4	5·8
May, 1962	Top	6·2	6·25	6·35	5·4	5·8	5·2	4·6	4·5	4·3
	Bottom ..	6·9	7·75	6·4	6·9	8·6	5·4	7·0	5·1	5·4
June, 1962	Top	6·6	6·6	6·6	5·65	5·7	5·5	4·8	5·0	4·9
	Bottom ..	7·4	9·2	6·8	6·85	8·7	5·45	5·1	8·15	5·25

PAINT

To check whether or not painters are observing the law relating to the use of lead paint on or about houses, 105 legal and 3 non-legal samples of paint were taken from the pots of painters applying the paint. Two (2) legal and two (2) non-legal samples were found to contain lead. As the users offered reasonable explanations and removed the offending paint, they had put on the house, no further action was deemed necessary.

One hundred and eighty-five legal and 56 non-legal samples of paint scraped from houses or furniture were obtained. Of these, 171 were found to contain lead contrary to the provisions of Section 127 of *"The Health Acts,* 1937 *to* 1960," with the result that the owners of 23 premises were required to remove offending paint.

Thirty samples of prepared paint were submitted for analysis to check if they were labelled correctly.

TOYS

The arrangements made by the wholesalers and retailers that no toys would be bought for sale until samples had been analysed in this State, appears to be working satisfactorily. During the year, only 3 legal and 40 non-legal samples were submitted for analysis. Of these, the 3 legal and 8 non-legal samples contained lead. As most of these were old stock and small in amount, no further action was deemed necessary when owners readily agreed to withdraw them from sale.

Inspection of premises licensed under the Liquor Acts and the perusal of plans for the Licensing Commission has occupied a considerable portion of the time of this staff.

Barbers Shops, the labelling of footwear and the testing of water in swimming pools for residual chlorine have also received attention.

SECTION OF HOOKWORM CONTROL

This unit is centred at Cairns and carries out surveys and treatment for hookworm in aboriginals. During the year, visits were made to Mitchell River, Edward River, Lockhart River, Domadgee, Hopevale, Mornington Island, Palm Island, Yarrabah, Woorabinda, and Settlements in the Daintree area.

A total of 6,347 specimens were examined of which 576 (9.6 per cent.) were positive. This is a decrease of 3·5 per cent. on the previous year and might indicate that improved sanitation and modern drugs are responsible.

Although Bephenium hydrochloride is difficult to give especially to children because of its bitter taste, there is little doubt that it is the best drug yet evolved for Ancylostomiasis.

The basic reason why aboriginals develop hookworm disease is that they have given up their nomadic life and have not yet adopted the sanitary practices of the white race. This results in re-infestation.

Every effort should be made by the Missions to educate the aboriginals in good personal hygiene but they will be unsuccessful if they do not supply sufficient sanitary conveniences.

DIVISION OF TUBERCULOSIS

Director: E. W. Abrahams, M.D. (Melb.), M.R.C.P. (Lond.)

Assistant Director: Cyril Evans, M.B., B.S., D.T.M., M.R.C.P. (Lond.)

Chest Physician, Thursday Island: G. Hales, M.B., Ch.B., T.D.D. (Wales)

Chest Physician, Cairns: R. J. B. Anderson, M.B., Ch.B., T.D.D. (Wales)

Chest Physician, Townsville: I. Dickson, M.B., Ch.B., C.P.H., R.C.P., R.C.S. (Eng.)

Chest Physician, Rockhampton: L. K. Manning, M.B., B.S., M.R.C.P. (Edin.)

Chest Physician, Toowoomba: Gwyn Howells, M.D., M.R.C.P. (Lond.)

STAFF

During the first four months of this year the Director was on sick leave and a particularly heavy burden was thrown on the remainder of the staff of the Brisbane Chest Clinic in consequence, especially on the Deputy-Director.

The staff has not changed in the regional chest annexes. In the past year in Brisbane Dr. John Edwards resigned in January, Dr. John Clarke took up duty in April and Dr. John Waller in June. Three additional positions for medical officers have been created to cope with the expected increase in clinical work following commencement of the mass X-ray survey in the forthcoming financial year.

BUILDINGS

On 20th March, 1962, temporary premises for the Brisbane Chest Clinic at 535 Wickham Terrace were formally opened by the Commonwealth Minister for Health, the Hon. Harry Wade, and the Acting-Minister for Health and Home Affairs, Hon. Gordon W. Chalk, M.L.A.

Transfer of the Clinic from 81 George Street was necessitated by the dismantling of this building consequent upon commencement of construction of the Health and Welfare Building. The new premises in portion of the old Lady Bowen Hospital building are a great improvement upon the old.

Alterations in the internal system of the Clinic made possible by the increased size of the building and adequate working space have been possible, the major improvement being the introduction of the wet-film system of X-ray interpretation which permits a patient, at a single visit, to be X-rayed and to be interviewed by a clinician. This formerly required two visits. Patients have expressed appreciation of the lack of a period of uncertainty between the film being taken and the medical interview, and also of the saving in transport costs.

During the year the building of the tuberculosis ward for mental hospital patients at the Toowoomba Mental Hospital has been practically completed. Early action is anticipated in the transfer of patients to this ward when staff are available. This will remove infectious patients, those requiring drug treatment for tuberculosis and those requiring investigation, from the general mental hospital population and, with other measures already in hand, should go far towards eliminating tuberculosis from mental hospital patients, a classical focus of tuberculous infection.

GENERAL

During this year 721 cases of tuberculosis were notified. There is now a total of 8,048 persons in the records of the tuberculosis services known to have had active tuberculosis since 1950. The large excess of this figure over the annual notification figure is a tribute to the effectiveness of modern drug treatment.

At the same time there is no cause for complacency. Many cases are still coming under notice with advanced disease as shown in Table XLII. Many of these are being discovered by mass radiography campaigns. On the other hand, there is evidence of increasing awareness in the medical profession of the importance of excluding tuberculosis as a cause of pulmonary symptoms and the increasing number of X-ray films sent from country centres to the Chest Clinic for interpretation, despite the introduction of visits to country clinics, is evidence of this.

The number of cases of lung cancer seen at the Clinic continues to show an unfortunate increase (Table XLIII). As in other centres close association with cigarette smoking seems the most likely cause of this rise.

COUNTRY CLINICS

Regular visits to country centres have again constituted one of the chief activities of the Clinic and regional physicians, except at the Thursday Island centre, make regular visits to certain towns, primarily for the follow-up of discharged cases of tuberculosis and to supervise their outpatient treatment. In addition, the routine investigation of cases of chest disease and consultation with local practitioners are carried out. This serves to integrate the chest services with the local hospital services, to the advantage of both.

During this year, following the mass X-ray surveys in the districts, regular visits to Ipswich, Southport and Kingaroy have been added to centres already regularly visited from Brisbane. In addition, Clinics are held at various intervals at the following centres:—Nambour, Gympie, Maryborough, Bundaberg, Dalby, Warwick, Stanthorpe, Gladstone, Mt. Morgan, Mackay, Bowen, Charters Towers, Ingham, Mt. Isa, Innisfail, Mossman, Mareeba and Atherton.

MASS X-RAY SURVEYS

The areas covered by the compulsory mass X-ray survey during 1961-62 were:—Brisbane Valley, South Coast, Albert Shire, Beaudesert Shire, Boonah, Moreton and Gatton Shires, Gatton Agricultural College, Ipswich City Shire, Rockhampton area, Miriam Vale, Gladstone and Calliope Shires, Rockhampton City, Livingstone, Fitzroy, Mt. Morgan, Banana, Duaringa, Emerald, Springsure, Belyando Shires, Mackay City and Pioneer Shire.

It was found necessary to change plans to X-ray centres west of Emerald as roads did not permit our caravan-mounted X-ray units to travel between Emerald and Alpha. This area will be surveyed later this year, when it will be approached from the south instead.

The survey went forward uneventfully and there was a good response to it from the general public. Results are as set out in Table XXXVII. . The figure for cases found 0·62 per 1,000 is low and probably reflects the general rural nature of the region. There is no obvious explanation as to why it is so much lower than the 2·34 per 1,000 reported in last year's report, and attempts to correlate the ratio found with the tuberculin rate of school children in the various localities have not been helpful. In addition, the areas surveyed are closer to Brisbane than those further North and it may be that easier access to X-ray facilities in Brisbane over a longer period has expedited the removal of infectious cases from the community for a longer period than in North Queensland.

Technical problems, which gave rise to great difficulty early in the survey, have given much less trouble during this year and, in consequence, surveys have been interrupted less frequently and fewer repeat films have been needed.

Clerical problems involved in checking of defaulters from the compulsory survey have been further investigated this year. Staff shortages make it difficult to check on all surveys and the following results of a particular check survey give an impression of the response.

By selection of various alphabetical groups resident in the South Coast area, a check on a group of 5,350 electors on the electoral rolls showed that apparently 900 had defaulted. On enquiry by letter, 500 were found to have had X-rays within the twelve months period allowed; a further letter

to the remaining 400 produced another 300 X-rays or satisfactory explanations. The remaining 100 were further circularised by registered letter, and finally four individuals were visited by health inspectors and all agreed to have X-rays taken.

It would appear that if the compulsory provisions of the Tuberculosis Regulations are sufficiently firmly enforced a very satisfactory overall response can be achieved. In consultation with the Public Service Commissioner plans are being taken to increase the staff available for this purpose.

Major problems still remain in checking all persons who are not on the electoral rolls, including those not Australian citizens.

HUMAN DISEASE DUE TO THE BOVINE STRAIN OF M. TUBERCULOSIS

In 1956 a review of cases infected by organisms of the bovine type was made and 6 cases were reported in meat-workers and others with work contact with animals. A further review of cases since discovered shows an additional 7 cases of whom 5 have direct occupational contact with cattle. Thirteen cases have therefore been discovered since 1953 indicating that occupations with direct animal contact carry a significant, though numerically small, risk. As some authorities claim that the bovine strain of M. tuberculosis may be modified in character by long passage through human beings it is possible that the risk may be greater than these figures suggest.

REFRESHER COURSE

In November, 1961, a post-graduate week was held at the Chest Hospital, Chermside, primarily as a "refresher" course for regional chest physicians. Dr. Alan King, Commonwealth Director of Tuberculosis, reported on recent advances described at the International Union Conference at Toronto held in September last year, and regional chest physicians contributed. The week was most successful and sets a pattern for future similar meetings. The attendance at evening sessions of Brisbane practitioners, particularly of those who had spent time at the Chest Hospital as resident medical officers, indicated interest in the problems discussed despite their rather narrow medical appeal.

DOMICILIARY VISITING

Space at the old building prevented expansion of our home visiting services as additional nursing staff could not be accommodated. With the new building five new nurses have taken up duty. Prior to this home visits to the families of notified cases could be undertaken only in Brisbane itself and the remainder of the area served by the Brisbane Clinic could not be visited. We now have the staff to permit home visits to the families of newly notified cases throughout the State except in remoter country areas; although in some instances these visits can be made only some considerable time after the notification is received. This will greatly improve investigation of contacts and is an important step in tuberculosis control.

TUBERCULIN TESTING

This has continued throughout the State and in the Brisbane district can now be undertaken in the extra-metropolitan area in addition to Brisbane itself. In a number of schools, special tuberculin surveys, followed by X-rays of positive reactors, have followed the discovery of an active case of tuberculosis in the school. No new cases were discovered.

As in former years the overall tuberculin rate is still disproportionately high compared with the incidence of new cases of tuberculosis. During this year this problem was discussed in a paper published in "Tubercle" by the Director and Dr. Harold Silverstone of the Department of Social and Preventive Medicine of the University of Queensland, and evidence presented as to its being, in all probability, not associated with true tuberculosis infection.

Dr. Singer of the Queensland Institute of Medical Research has also done a great deal of study from the bacterological angle upon the occurrence of organisms likely to cause this sensitisation. There is evidence from his studies, and from those of overseas, of the prevalence of mycobacteria other than *M. tuberculosis* in the environment in warm and tropical climates and it seems certain that these organisms will continue to cause difficulty in tuberculin testing. The discovery of cases of pulmonary infection caused by these organisms continues to present difficulties in treatment and management and, as yet, no drug has presented itself which is as effective against these organisms as against true tuberculosis.

STATISTICS

The Tuberculosis Advisory Council of the Commonwealth Department of Health has prepared a uniform scheme for tuberculosis statistics and collection of these figures will be commenced as from 1st July, 1962. This will result in certain changes in the form of statistical returns in future, notably in the prevalence rate as calculated. It is intended to establish a case register of active cases of tuberculosis and a patient whose treatment has been satisfactory and who shows no signs of activity will be removed from this case register after three years. The number of cases recorded will therefore commence to drop as the process is instituted and the prevalence rate will also fall. This removal of cases from the register will be for statistical purposes only and removed patients will remain under regular review as at present.

TUBERCULOSIS ALLOWANCES

A further fall in the number of persons receiving the tuberculosis allowance is noted (Table XLIX). This is undoubtedly due to the lower notification rate and the shorter overall period of hospitalisation and time off work for each case.

Some complaints of delay in initial payments of the tuberculosis allowance have been received during the past year. Many of these are due to the commencement of payment of the allowance, not from the date of incapacity but from the first Social Services payday following receipt of the tuberculosis allowance application form by the State Director of Tuberculosis. It is regretted that it has not yet been possible to remedy this anomaly.

TABLE XXXVI

SHOWING NUMBER OF HOSPITAL BEDS IN QUEENSLAND EXCLUSIVELY AVAILIABLE FOR TUBERCULOSIS PATIENTS

Chest Hospital, Chermside	334
Rockhampton Thoracic Annexe	50
Townsville Thoracic Annexe	60
Cairns Thoracic Annexe	50
Toowoomba Thoracic Annexe	50
Thursday Island	92
Repatriation Hospitals—	
Greenslopes	80
Kenmore	76
Total	792

TABLE XXXVII

SHOWING NUMBER OF X-RAY EXAMINATIONS CARRIED OUT

—	Chest Clinic	Mobile Unit	North Brisbane Hospital	Princess Alexandra Hospital	Rock-hampton	Too-woomba	Cairns	Towns-ville	Thursday Island	Total
Micro Films	42,510	155,842	10,003	25,719	4,948	6,243	5,965	2,260	..	253,490
Micro Re-rays	4,257	3,853	322	643	89	125	..	210	..	9,499
Other large Films	11,989	366	..	..	4,047	3,253	5,600	3,352	3,459	32,066
Total	58,756	160,061	10,325	26,362	9,084	9,621	11,565	5,822	3,459	295,055

TABLE XXXVIII

SHOWING RESULTS OF THE COMPULSORY MASS CHEST X-RAY SURVEY OF PERSONS OVER 14 YEARS OF AGE FROM 1ST JANUARY, 1961 TO 31ST DECEMBER, 1961

Locality	Estimated No. of Persons Over 14 Years of Age	No. of Micro-Films Taken	Number of Active Cases Found	Number of Cases Per 1,000 Micro-Films	Inactive Cases	Old Cases Rediscovered	Non-Specific Fibrosis	Cardiac Abnormality	Carcinoma	Other Tumours	Sarcoidosis	Bronchiectasis	No Significant Abnormality After Investigation	Pneumoconiosis	Intercurrent or Pneumonic	Under Investigation	Other Diseases
Balance of Maryborough Area	590	547	1	1·83	6	..	4	1	1	1	..	..	6	..	1	..	1
Gympie Area	12,600	16,926	13	0·77	135	1	95	59	8	16	2	26	136	12	17	11	54
Nambour Area	15,423	16,981	10	0·59	203	..	113	52	5	10	3	18	155	3	16	44	55
Brisbane North Coast Area	10,900	12,745	12	0·94	156	1	98	89	6	5	..	14	140	4	23	16	54
Queensland University and Teachers College	7,901	4,878	2	0·41	14	..	2	3	..	..	..	3	37	..	3	..	1
Brisbane South Coast Area	28,103	27,483	15	0·55	383	..	238	139	18	13	4	32	303	3	37	40	141
Ipswich Area	36,869	40,469	30	0·74	454	..	246	96	5	18	3	47	392	17	35	46	133
Kingaroy Area	12,250	16,526	5	0·30	170	..	110	99	5	4	1	37	173	3	38	51	72
Beaudesert Area	3,600	5,461	3	0·55	41	..	25	12	..	1	..	13	32	1	11	8	10
Boonah Area	2,786	4,929	1	0·20	46	..	25	10	..	1	..	6	28	1	7	5	4
Gatton and District	5,213	8,897	4	0·45	41	..	20	16	2	9	..	16	57	1	8	20	15
Totals	136,235*	155,842	96	0·62	1,649	2	976	576	50	78	13	212	1,459	45	196	241	540

* Calculated as 75 per cent. of total population as supplied by Local Authorities.

TABLE XXXIX

SHOWING SOURCES OF NOTIFICATIONS OF TUBERCULOSIS 1960-1961 AND 1961-1962

—	1960–61	1961–62
Hospitals	144	64
*Mass Survey	..	163
Chest Clinic	404	215
Private Practitioners	58	38
Death Certificates	..	..
Sanatoria	90	161
Repatriation Department	54	56
Thursday Island Hospital	10	10
Post Mortem	3	12
Cherbourg Aboriginal Settlement	1	1
Palm Island Aboriginal Settlement	1	1
Not Stated	2	..
	767	721

Not previously shown under separate heading.

TABLE XL

SHOWING INFORMATION FROM CASE REGISTER

—	Brisbane			Country			State		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
Notifications, 1961–62	199	69	268	340	113	453	539	182	721
Cases on Register 1–7–61 and still on Register	2,240	1,234	3,474	2,582	1,289	3,871	4,822	2,523	7,345
**Cases added to Register 1961–62	193	67	260	332	111	443	525	178	703
On Register 30th June, 1962	2,433	1,301	3,734	2,914	1,400	4,314	5,347	2,701	8,048

M.—Males; F.—Females; P.—Persons.

** Represents net increase after deaths and other removals from Register.

TABLE XLI

SHOWING BACTERIOLOGICAL STATUS OF PATIENTS

——	Brisbane	Country	State
Pulmonary—			
Positive—			
Smear	58	70	128
Culture	84	136	220
Animal Inoculation	3	3	6
Negative—			
Smear	18	67	85
Culture	15	44	59
Animal Inoculation	3	1	4
Not Stated—			
Results pending	60	111	171
Death Notifications	7	6	13
Total Pulmonary	248	438	686
Non-Pulmonary—			
Positive	3	3	6
Negative	5	2	7
Not Stated	11	10	21
Death	1	1	2
Total Non-Pulmonary	20	16	36
Primary	..	4	4
Total Primary	..	4	4
Total All Forms	268	458	*†726

* Includes 4 cases of Pulmonary and Non-pulmonary Tuberculosis.

† Includes 1 case of Primary and Pulmonary Tuberculosis.

TABLE XLII

STAGE OF DISEASE IN NEW NOTIFICATIONS OF PULMONARY TUBERCULOSIS

Minimal Disease	215
Moderately Advanced Disease	351
Far Advanced Disease	81
Not Stated	29
Total	676

TABLE XLIII

NUMBER OF NEW CASES OF CARCINOMA OF THE LUNG SEEN AT THE CHEST CLINIC, BRISBANE

1st July, 1958 to 30th June, 1959	56
1st July, 1959 to 30th June, 1960	65
1st July, 1960 to 30th June, 1961	83
1st July, 1961 to 30th June, 1962	111

TABLE XLIV

SHOWING DETAILS OF TUBERCULOSIS IN MIGRANTS—QUEENSLAND

——	British			Non-British			Total		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
Cases Prior to 1st July, 1961	202	105	307	292	132	424	494	237	731
Cases, 1st July, 1961 to 30th June, 1962	49	18	67	48	18	66	97	36	133
Total	251	123	374	340	150	490	591	273	864

TABLE XLV

SHOWING NUMBER OF DEATHS FROM TUBERCULOSIS AND DEATH RATE FROM TUBERCULOSIS (PER 100,000 MEAN POPULATION), QUEENSLAND

Year	Deaths	Death Rate
1950	236	19·8
1951	226	18·4
1952	216	17·2
1953	162	12·6
1954	140	10·6
1955	137	10·2
1956	81	5·7
1957	92	6·6
1958	83	5·9
1959	78	5·4
1960	83	5·7
1961	72	4·7

TABLE XLVI

SHOWING NUMBER OF CASES ON REGISTER AND PREVALENCE RATE (PER 100,000 POPULATION), QUEENSLAND*

Year Ending	Case on Register	Prevalence Rate
30th June, 1952	1,942	154
30th June, 1953	2,569	198
30th June, 1954	3,201	243
30th June, 1955	3,746	279
30th June, 1956	4,263	311
30th June, 1957	4,731	343
30th June, 1958	5,371	378
30th June, 1959	5,983	398
30th June, 1960	6,702	462
30th June, 1961	7,363	505
30th June, 1962	8,048	531

* Total known cases on register per 100,000 population.

TABLE XLVII

Showing Tuberculin Tests and B.C.G. Vaccinations

—	Tuber-culin	Did Not Return		Positive		Positive After Previous B.C.G.		Negative		B.C.G. Given		B.C.G. Not Given		Refused B.C.G. Vaccination	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Chest Clinic	5,000	223	4·5	791	16·6	1,309	27·4	2,677	56·0	1,309	48·9	1,110	41·5	258	9·6
Schools—															
Brisbane	8,995	173	1·9	1,418	16·1	450	5·1	6,954	78·8	6,860	98·6	..	..	94	1·4
*Grovely Convent	242	..	..	10	4·1	9	3·7	223	92·1	..	..	..	..	..	..
*Somerville House	347	..	..	44	12·7	164	47·3	139	40·0	..	..	139	100·0	..	..
*Balmoral High School	364	27	7·4	97	28·8	198	58·8	42	12·5	..	..	42	100·0	..	..
*Balmoral High School	352	..	..	67	19·0	125	35·5	160	45·5	..	..	160	100·0	..	..
Schools—Ipswich	848	16	1·9	236	28·4	28	3·4	568	68·4	563	99·1	..	..	5	0·9
Country Survey Landsborough to Gympie	2,864	39	1·4	523	18·5	37	1·3	2,265	80·2	2,238	98·8	..	..	27	1·2
Country Survey Bundaberg, Gin Gin, Childers, Biggenden	2,431	29	1·2	959	39·9	35	1·5	1,408	58·6	1,367	97·1	..	..	41	2·9
P.P.D. Survey in Brisbane—															
State Schools	1,035	..	..	56	5·4	25	2·4	954	92·2	932	97·7	16	1·7	6	0·6
St. Vincents Home Nudgee	329	..	..	30	9·1	97	29·5	202	61·4	..	..	..	..	..	..
Queensland University	479	85	17·7	89	22·6	150	38·1	155	39·3	148	95·5	..	..	7	4·5
Teachers Training College	984	17	1·7	235	24·3	403	41·7	329	34·0	314	95·4	..	..	15	4·6
Rockhampton	2,692	65	2·4	1,112	42·3	410	15·6	1,105	42·1	1,018	92·1	76	6·9	11	1·0
Cairns	7,472	274	3·7	2,400	33·3	1,656	23·0	3,142	43·7	2,364	75·2	750	23·9	28	0·9
Toowoomba	5,017	139	2·8	1,909	39·1	555	11·4	2,414	49·5	2,186	90·6	199	8·2	29	1·2
Townsville	2,424	70	2·9	681	28·9	605	25·7	1,068	45·4	1,047†	98·0	104	9·7	4	0·4
Thursday Island	641	23	3·6	269	43·5	215	34·8	134	21·7	346†	..	8	6·0	..	..
	42,516	1,180	2·8	10,926	26·4	6,471	15·7	23,939	57·9	20,692†	86·4	2,604	10·9	525	2·2

* Special Survey in these schools after contacts were reported. † Children given B.C.G. without prior testing.

TABLE XLVIII

Complications Following Vaccinations

Locality	Age Group	Given B.C.G. No.	Local Ulcer		Enlarged Glands		Incised Glands		Total Complications	
			No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage
Chest Clinic, Brisbane	0– 2 years	331	1	0·3	1	0·3	..	..	2	0·6
	3–14 years	8,194	2	0·02	2	0·02	..	..	4	0·05
	Over 14 years	5,206	1	0·02	1	0·02	..	..	2	0·04
	Total	13,731	4	0·03	4	0·03	..	..	8	0·06
Thursday Island	0– 2 years	273	2	0·73	4	1·46	..	..	6	2·19
	3–14 years	59	..	..	..	..	..	..	..	..
	Over 14 years	14	..	..	..	..	..	..	..	..
	Total	346	2	0·58	4	1·16	..	..	6	1·73
Cairns	0– 2 years	85	..	..	..	..	..	..	..	..
	3–14 years	1,661	..	..	..	..	..	..	..	..
	Over 14 years	618	..	..	2	0·32	..	..	2	0·32
	Total	2,364	..	..	2	0·08	..	..	2	0·08
Rockhampton	0– 2 years	73	1	1·37	..	..	..	..	1	1·37
	3–14 years	898	1	0·11	..	..	..	..	1	0·11
	Over 14 years	47	..	..	..	..	..	..	..	..
	Total	1,618	2	0·20	..	..	..	..	2	0·20
Townsville	0– 2 years	47	1	2·13	..	..	..	..	1	2·13
	3–14 years	885	5	0·56	..	..	..	..	5	0·56
	Over 14 years	115	..	..	..	..	..	..	..	..
	Total	1,047	6	0·57	..	..	..	..	6	0·57
Toowoomba	0– 2 years	41	..	..	..	..	..	..	..	..
	3–14 years	1,756	3	0·17	..	..	..	..	3	0·17
	Over 14 years	389	..	..	..	..	..	..	..	..
	Total	2,186	3	0·14	..	..	..	..	3	0·14

TABLE XLIX

Showing Number of Tuberculosis Allowances Being Paid in Queensland, at 30th June, 1962

—	Male	Female	Total
Number accommodated in tuberculosis institutions	175	36	211
Number not so accommodated	122	42	164
Total on Allowance	297	78	375

DIVISION OF INDUSTRIAL MEDICINE

Director of Industrial Medicine: E. M. RATHUS, M.B., Ch.B. (Cape Town)

Radiation Health Physicist: K. A. STEVENS, B.Sc. (Q'ld)

Inspector in Charge—Weil's Disease Control: D. KENNEDY, M.R. San. I.

This Division is responsible for the investigation of occupational health problems in industry. The services of the Division are available for all facets which bear relation to the health problems of workers in whatever situation and of whatever degree, and range from advice to a particular industry or to the individual workman. Investigations are undertaken where known or expected hazards are present or are directed towards the discovery of less-recognised causes of trouble. For instance, attention may be focussed on a group of workers exposed to a known lead hazard, or a search may be made for the cause of a troublesome and recurring dermatitis. In all cases full advantage is taken of the examination of the situation on the environmental level by the most accurate scientific means available combined with biological tests to gauge the effects on the exposed worker-group. The collated data is utilized to make reasonable recommendations to industry for the elimination or mitigation of the discovered hazard, and to arrange for the supervision of workers where this is indicated.

The Division owes acknowledgement to the Department of Labour and Industry for assistance in locating problems and for the implementation of recommendations deemed desirable.

In like manner it records appreciation of the co-operation of all Union organisations in the elucidation of occupational health problems, and of management and industry in its efforts to apply the precepts of modern thought on these important matters.

1. ROUTINE EXAMINATIONS

During the year 113 examinations were conducted in connection with occupational exposures. These included lead workers, occupational fevers, contact dermatoses, organic phosphate exposure, arsenic sprayers, silicosis and others.

Fifty premises were inspected in order to assess specific hazards reported or suspected, and the necessary investigations carried out.

A large number of inquiries and routine matters were received from the State Government Insurance Office, and attended to in the usual way. Expert evidence was given in court on a contentious claim relating to lead poisoning, and in the matter of the toxicity of petroleum distillates and accidental poisoning in childhood.

2. ENVIRONMENTAL INVESTIGATIONS

The Industrial Hygiene Section of the Government Chemical Laboratory provides the necessary scientific data for the assessment of environmental problems, and a number of estimations of toxic materials, dusts, fumes and vapours were undertaken during the year.

A very complete investigation into a lead smelter and scrap metal works was undertaken, with the result that concrete recommendations could be made in regard to fume extraction and safety procedures.

Some estimations on benzol fumes were carried out, and dust counts and ventilation requirements of a large woollen mill were investigated. A forward survey on the exposure of growers using arsenical spray is in hand, and it is hoped that the information gained will eventually prove useful.

3. RADIATION

A Radiation Health Physicist has now been appointed, and it is intended to apply the principles of radiation safety to operators in all fields of this most calculable of hazards. During January, 1962, regulations under *"The Radio-Active Substances Act of* 1958" became operable, and will be utilized to create proper standards of radiation safety in Queensland. Basic equipment has been purchased and a Protection Film Service fully geared to present-day requirements has been initiated within the Division. It must be appreciated that this Film Service was previously under the control of the Department of Physics, University of Queensland, and that the basic pattern set is being carried forward. The Division owes its gratitude to the Department of Physics for its expert help in the past and for its pioneer work in radiation safety.

The function of this section is to ensure the safe use of ionising radiation. It will carry out inspections of all types of X-ray equipment used in medicine, dentistry, and industry, and will be available to give advice regarding the installation and protection measures necessary with use of such equipment in hospitals and in industry. It will ensure that adequate protection measures will be taken in the use of radioactive substances in the many varied fields, and be available for emergencies and problems of handling associated with the use of radioactive substances for all situations at any level, governmental or private.

The following work has been carried out:—

(1) Design of radiation rooms for industrial radiography.

(2) Loading of gamma-ray camera with 10 curies of Iridium.

(3) Advice and measurement on problems in diagnostic use of X-rays.

(4) Survey of a veterinary surgery and advise of problems of X-rays in veterinary work.

(5) Design of X-ray room in public hospitals.

(6) In conjunction with University Safety Officer a general Code-of-Practice for use in University Departments has been drawn up.

4. MOUNT ISA MINES

A detailed report on a follow-up survey on the occupational hazards and environmental problems at these mines was prepared by the Division and published by the Industrial Conciliation and Arbitration Commission of Queensland in September, 1961. In summary, it was found that most recommendations previously made had been accepted and that many improvements were obvious about the lead smelter area. Any effect on lead absorption appeared to be towards minimising of this risk, and a further short visit in June, 1962 amplified this opinion. In general, the impression gained is that the administration of Mount Isa Mines are making every effort to utilise the most advanced ideas on occupational and environmental health problems in every facet of their mining operations.

5. LEAD INDUSTRY

A constant survey of workers exposed to lead hazards of varying degree is undertaken by this Division.

During the year, over 100 visits to known lead industries were undertaken and upwards of 1,000 slides were examined for stippled cells. Coproporphyrin screening of exposed worker groups was used quite intensively and over 100 screening examinations were done.

Blood lead estimations are not uncommonly used and experience seems to indicate that this test is reasonably specific for individual workmen as a gauge of their exposure and absorption level. The same opinion cannot be expressed in respect of urinary lead concentrations which, in the experience of this Division, are a reliable indication of group exposure but bear no constant relationship to the individual clinical problem.

A very thorough investigation was undertaken of the lead smelter of a scrap metal firm where a hazard was postulated owing to minimal attention to necessary precautions in operations. Lead in air concentrations at the furnace varied between 20-70 times the maximum allowable concentration.

During the year one man was hospitalized for versenate therapy and showed an excretion of 6·6 mgs. per day on the second day of treatment, thus confirming an excessive body load. One other man was treated at an out-patient level and put off work on compensation for 6 weeks. Suitable advice has been given to the firm and the men maintained under constant surveillance.

6. LECTURES, PAPERS, ETC.

During the year lectures were given to the following:—

(1) Health Inspectors Conference, August, 1961, "Toxicity of Poisons Used in Crop Spraying."

(2) North Queensland Occupational Safety Convention, Townsville,"Industrial Medicine and the Tropics."

(3) A visit was paid to the Commonwealth Acoustic Laboratory in Sydney to discuss problems of industrial deafness.

(4) Mr. Thiele of the Industrial Hygiene Section attended an interstate conference on the efficiency and safe use of Phostoxin in the fumigation of wheat, held in Melbourne under the auspices of the Australian Wheat Board.

(5) A visit was paid to the cane fields and to various industries in North Queensland.

(6) A report was published in the *Queensland Government Gazette* on a study of the environmental and health hazards at Mount Isa Mines.

RATHUS, E. M. (1961), "Report on a Further Investigation at Mount Isa Mines, With Particular Reference to a Comparative Study", *Queensland Government Industrial Gazette*, Vol. XLVIII, No. 5, Tuesday, 12th September, 1961.

7. OTHER MATTERS

During the year one man was certified as suffering from asbestosis and a professional diver was recompressed by submersion to the required depth and subsequent staging.

With the co-operation of the Commonwealth Acoustic Laboratory a noise survey was undertaken in regard to dredger operations on the Brisbane River. The air pollution problems of sugar mills in Nambour and Maryborough were looked into.

Some cases of dermatitis occurred in an insecticide formulating firm and corrective measures were advised. One man developed severe sensitivity to di-isocyanate used in foam plastic insulation and a very difficult clinical diagnosis arose in the case of a man who appeared to have developed a Hamman-Rich syndrome with a possible underlying silicosis.

Over 200 blood specimens were collected in order to assess the psittacosis problem in the poultry industry following several clinical cases. A higher proportion of significant titres were found than in the average population. Details will be submitted for publication.

On the waterfront the problems of bulk coal loading were investigated at Gladstone, and an appraisal of wet weather clothing for use in tropical ports was submitted for the information of the industry.

8. SILICOSIS AND ANTHRACOSILICOSIS

Some further data is available on the cases discovered as a result of the compulsory chest X-Ray Mass Survey. The co-operation of Dr. I. Dickson, Townsville, and Dr. R. Anderson, Cairns, both of the Division of Tuberculosis is acknowledged.

TABLE L

SHOWING PARTICULARS OF PATIENTS WITH RADIOLOGICAL SILICOSIS

Age Groups	Townsville	Cairns	Total
40–49 years	2	..	2
50–59 years	2	3	5
60–69 years	17	6	23
70 years and Over	38	3	41
	59	12	71

Forty of these men had no symptoms. Of the remaining twenty-seven, symptoms ranged from slight dyspnoea to severe dyspnoea, chest pain and cough. In many cases, the age factor is obviously significant, but, as is well known, the degree of dyspnoea cannot be correlated in any individual case with the amount of radiological involvement. It is interesting to record that thirty-two of these men had significant exposure on the old Charters Towers gold fields, and are a heritage of the days of dry-drilling in quartzite.

Individual records are not maintained on miners in this State as adequate machinery exists for the payment of compensation to cases of silicosis and coal-workers' pneumoconiosis through the Chest Board of the State Government Insurance Office. Pre-employment X-Ray is not required by regulation, but power to make rules governing medical examinations exists under the Mines Regulation Acts.

9. BOARDS, ETC.

Meetings of the Occupational Health Committee of the National Health and Medical Research Council, the Health, Welfare and Safety Board of the Department of Labour and Industry, the Chest Board of the State Government Insurance Office, the Air Pollution Advisory Council and the Radiological Advisory Council were attended in an official capacity.

10. WEIL'S DISEASE CAMPAIGN

With the exception of short periods of rain, ideal harvesting conditions for the 1961 season allowed rapid harvesting and crushing of cane supplies throughout all northern mill areas. Pre-harvest burning presented no great problem. Crops were generally of a good handling standard with both manual and mechanical harvesting in operation.

There were the usual sporadic cases of leptospirosis during the season, but the incidence was considered normal.

Wet weather prevailed throughout the slack season months of January to June, and farm cleaning operations were hampered as a result. With the accompanying gusty winds some canefields became sprawled or lodged, and rat infestation light but widespread. It is anticipated that increased rat infestation will result during the 1962 harvest, and when coupled with the lodged cane and wet conditions will prove a hazard from the health aspect.

PEST BOARD ACTIVITIES

Baiting figures are comparable with those for 1961. Some boards increased the usage of the anti-coagulant type baits in preference or in conjunction with thallium or phosphorus, whereby a selection of baiting material is becoming available to meet specific conditions. It is anticipated that increased baiting will result during the 1962 season.

The use of chemical sprays has accelerated the destruction of rat harbourages, an important consideration in reducing rat population.

In most cases where cane assignments have been transferred to other localities substantial acreages of residual cane have become ideal rat breeding areas. It is considered, therefore, that destruction of this cane should be carried out on transfer of the assignment.

Agricultural drainage is being steadily improved in most areas and any scheme within economic limits merits consideration. Adequate drainage is all important for the control of leptospirosis. Moisture is an essential for the survival of the organism and without which its life is short lived.

EPIDEMIOLOGY OF FEVER CASES

The field investigation of fever cases was again commenced in January, 1961. Patients giving a positive laboratory result were investigated on behalf of the Department and the Queensland Institute of Medical Research. All patients were not of current origin. Some had occurred several years previously, but data was required for special survey purposes. Patients were investigated between Tully and Mossman and the Atherton Tablelands inclusive. A total of 133 were contacted up to 30th June, 1962, and involved 30 different occupations, principally associated with primary pursuits, viz. sugar, meat, dairying and forestry. The majority of patients involved were those of "Q" fever, leptospirosis and scrub-typhus. This work is continuing as time permits in association with Weil's disease control duties.

DIVISION OF MATERNAL AND CHILD WELFARE

Director: H. C. MURPHY, M.B., B.S.

Deputy Director: J. McFARLANE, M.B., B.S.

Medical Officer: H. D. MACBRIDE, M.B., B.S.

Superintendent: M. F. NIXON, R.A.N.F.

Deputy Superintendent: A. P. HERTWECK, R.A.N.F.

During 1961 the Maternal and Child Welfare Department has continued its service to mothers and babies throughout the State. In 1952 only 56 per cent. of all the babies born in the State attended the clinics, but during 1961 this rose to 63 per cent. Further expansion of the service is necessary and possible.

Dr. Alex Paterson, part-time medical officer from 1951 until his sudden death in April 1962, will be missed by both the staff and the children who have become so familiar with his work at the toddler's clinics.

In May 1962 Dr. Murphy commenced long service leave and Dr. Heather MacBride was appointed a full time medical officer.

On the 30th June, 1962, of the total staff of 147 sisters, 73 were permanent members. This is an improvement on last year's staff position when there were 20 more temporary staff than permanent staff. It is necessary that a proportion of the staff be temporary employees so that the trainees, who graduate each year, can obtain post graduate experience. Two groups of students have completed their training within the year—29 receiving certificates in July and 36 in January.

During the year a series of seven illustrated talks were given on A.B.Q. Channel 2 by Dr. McFarlane. The titles of the talks were as follows:—

(1) Interview on the work of the Maternal and Child Welfare Department.

(2) Ante-natal care.

(3) Stages of development of a normal baby.

(4) Bathing baby. This was a film produced by the Queensland Health Education Council, under the direction of the Maternal and Child Welfare Department.

(5) What should my baby weigh?

(6) Breast feeding.

(7) Feeding baby.

Since December 1961, medical students have been attending the clinics during their pediatric term instead of during their obstetrical term. They are shown, in groups of 6 or 8, a series of slides illustrating the work of the department and receive copies of the departmental publications.

Thirty-two (32) students have attended the Fortitude Valley ante-natal clinic to receive portion of their ante-natal training. In addition to taking the mother's history and performing abdominal palpation they attend the sister's lectures to the expectant mothers and the physiotherapy classes.

Requests for "Care of Mother and Child," "The Expectant Mother" and "Ante-natal and Post-natal Exercises" are continually being received. The booklet "Problems of Prematurity" has been revised and is being issued to Maternal and Child Welfare trainees and medical students.

The following are the titles of the articles of topical interest which have been forwarded each month to 60 newspapers throughout the State:—

Wind burn.
How can I protect my baby?
Plastic can kill.
Why should I protect my children?
What does this rash mean?
Accidents do happen.
What makes a happy holiday?
Hot weather notes.
Why do I need ante-natal care?
What is a blue baby?
Does your child stutter?
What shoes should I buy?

During the year kindergarten trainees, social service workers and students have visited the administration centre and the St. Pauls Terrace Home to observe the work of the department.

DIRECTOR'S CONSULTANT CENTRE

Attendances during the year ended June, 1962, were as follows:—

Number of children examined for admission to Sandgate Home	1,598
Number advised by 'phone	554
Attendance at Director's Consultant Centre for advice	1,656
Total number of children examined or advised at Centre	3,808

PRE-SCHOOL HEALTH CENTRES

Metropilitan Area

The total number of examinations during the year was 5,415 of which 2,345 were first examinations and 3,070 were subsequent examinations. The daily average per clinic during the year was 17·02.

A pre-school clinic was opened at Moorooka on 12th June, 1962, and an extra toddler's clinic was granted to Ipswich centre where it was badly needed as appointments in Ipswich were from eleven to thirteen monthly intervals. Eight (8) kindergartens are now visited.

Country Centres

Showing the number of examinations of toddlers at country centres.

TABLE LI

Centres	New Patients	Subsequent Visits	Total Visits	Number of Clinics	Average per Clinic
Cairns ..	265	154	419	36	11·6
Rockhampton	124	17	141	21	6·7
Toowoomba ..	19	23	42	14	3·0
Townsville ..	181	107	288	22	13·09

ATTENDANCES AT CENTRES AND SUB-CENTRES

Throughout the State there are now 251 centres and sub-centres, 72 being in the metropolitan area and 179 in the country.

The following sub-centres were opened during the year:—

(1) Harlaxton on 8th August, 1961, serviced from Toowoomba.

(2) The Gap on 23rd August, 1961, serviced from Paddington.

(3) Carmila on 13th December, 1961, serviced from Mackay.

Approval has been given for the establishment of a sub-centre at Leichhardt.

A parent centre at Inala Heights was opened on 27th June, 1962.

Total attendances of infants and children and expectant mothers for year 1961-62 is 467,248, as compared with the previous record of 494,215 for year 1960-61, showing a decrease of 26,967.

This fall in attendance has occurred mainly in the metropolitan area and reflects the general economic trend. Increased tram, bus and rail fares, although not affecting the initial attendances, are reducing the number of subsequent visits made, and emphasises the need for the continuation of decentralisation of the parent centres.

TABLE LII

ATTENDANCES OF INFANTS AND CHILDREN AT MATERNAL AND CHILD WELFARE CENTRES AND SUB-CENTRES

——	1959–60	1960–61	1961–62
Metropolitan			
Fortitude Valley and Sub-Centres	34,437	31,426	26,962
Herschell Street and Sub-Centres	39,461	40,086	34,681
Moorooka and Sub-Centres (Parent Centre from 28–11–60)	..	8,213	14,426
Nundah and Sub-Centres	15,376	15,122	15,450
Paddington and Sub-Centres	13,381	13,432	12,774
Sandgate and Sub-Centres	11,387	13,980	14,554
South Brisbane Sub-Centres	12,625	11,329	8,841
West End and Sub-Centres	8,106	9,613	8,963
Woolloongabba and Sub-Centres	35,345	28,799	22,018
Wynnum and Sub-Centres	10,041	10,672	9,728
Country			
Atherton and Sub-Centres	4,854	4,447	4,152
Ayr and Sub-Centres	7,077	6,449	6,310
Barcaldine and Sub-Centres	2,817	2,906	2,753
Biloela and Sub-Centres	7,961	7,195	6,408
Bowen and Sub-Centres	5,716	6,219	6,234
Bundaberg and Sub-Centres	14,196	15,630	14,718
Cairns and Sub-Centres	20,472	23,100	24,888
Charleville and Sub-Centres	4,956	4,028	4,465
Charters Towers	3,654	3,479	3,397
Dalby and Sub-Centres	5,188	5,250	5,600
Emerald and Sub-Centres	3,639	4,138	3,996
Gayndah and Sub-Centres	5,390	6,052	6,315
Gladstone and Sub-Centres	5,415	4,499	4,716
Goondiwindi and Sub-Centres	6,504	6,743	5,642
Gympie and Sub-Centres	8,373	9,024	9,503
Ingham and Sub-Centres	4,464	5,402	5,612
Innisfail and Sub-Centres	11,614	11,401	10,625
Ipswich and Sub-Centres	19,881	20,632	20,598
Kingaroy and Sub-Centres	3,958	3,435	2,873
Longreach and Sub-Centres	3,157	2,626	2,503
Mackay and Sub-Centres	17,377	17,842	18,391
Mareeba and Sub-Centres	3,993	4,985	4,834
Maryborough and Sub-Centres	12,217	12,818	11,795
Mount Isa and Sub-Centres	7,830	8,602	6,800
Murgon and Sub-Centres	3,460	3,637	4,320
Nambour and Sub-Centres	7,222	8,079	7,268
Railway Car Sub-Centres	4,466	4,543	4,295
Rockhampton and Sub-Centres	19,148	24,173	19,715
Roma and Sub-Centres	4,400	5,707	5,211
Southport and Sub-Centres	12,756	10,714	9,572
Toowoomba and Sub-Centres	11,059	11,325	10,684
Townsville and Sub-Centres	18,904	20,011	19,910
Warwick and Sub-Centres	7,563	7,137	6,183
Social Welfare Services	4,803	4,762	4,531
Totals	464,643	479,662	453,214

TOTAL ATTENDANCE OF INFANTS AND CHILDREN AND EXPECTANT MOTHERS

1959–60	1960–61	1961–62
478,086	494,215	467,248

TABLE LIII

AN ANALYSIS OF THE NEW CASES SEEN AT THE CENTRES

	1959–60	1960–61	1961–62
Infants—			
Under one year	22,352	22,859	23,052
One to two years	6,049	6,848	6,566
Over two years	2,951	3,134	2,598
Total	31,352	32,841	32,216
Expectant mothers	1,311	1,713	1,681
Total new cases	32,663	34,554	33,897

MOTHERCRAFT HOMES

The Mothercraft Homes at St. Paul's Terrace, Clayfield, Ipswich, Toowoomba and Rockhampton continue to care for babies as well as mothers and babies. The Ipswich Home cares for more premature babies and more mothers than the other homes. This reflects the trend of more breast feeding in the country areas. The premature babies are cared for at this home as an aid to the Ipswich Maternity Hospital and it does result in the earlier establishment of breast feeding in this group.

Among the babies cared for at the Metropolitan Homes, are a number of State Children (14 per cent. of the 172 babies admitted to the Clayfield Home were referred by the State Children's Department). These babies are established on a four-hourly feeding routine before being transferred to the Diamentina Receiving Depot.

Dr. Mary Crosse, O.B.E., the celebrated English pediatrician visited the St. Paul's Terrace and Sandgate Homes, during her visit to Brisbane in October, 1961. Alterations are being made to the Toowoomba Home and it is anticipated that they will be completed early in the next financial year.

During the year a survey was made on the mothers and babies discharged from the St. Paul's Terrace Home during 1961 (January to December). The babies totalled 235 and were made up as follows:—

First babies	90
Second babies	50
Third babies	28
More than third	48
Particulars not known	19
Total	235

Of these children the greatest proportion of those who were breast fed were first babies. As the child's position in the family increased so did the age of admission to the Home and the percentage of those who were artificially fed.

TABLE LIV

Baby	Method of Feeding				Age of Admission					
	Artificially Fed		Breast Fed		Under 2 Weeks		2–8 Weeks		Over 8 Weeks	
	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.
1	30	27	70	63	26	23	52	47	22	20
2	50	25	50	25	16	8	54	27	30	15
3	86	24	14	4	21	6	32	9	47	13
Over 3	94	45	6	3	15	7	31	15	54	26

Most of the babies admitted to the Home had mothers between 20 and 30 years of age; this corresponds to the general distribution of babies in the population.

TABLE LV

Baby	Age of Mother (in years)									
	Under 20 Years		20–30 Years		30–40 Years		Over 40 Years		Not Known	
	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.
1	14	13	67	60	17	15	1	1	1	1
2	..	0	72	36	24	12	2	1	2	1
3	3·5	1	54	15	28	8	11	3	3·5	1
Over 3	..	0	33	16	52	25	15	7	..	0

For first babies a further comparison was made between the maternal age groups requiring the assistance of the home and birth distribution to these age groups.

TABLE LVI

Births to the Age Groups	Age of Mother	Home Care to the Age Groups
Per cent.		Per cent.
17	Under 20 years ..	15
71	20–30 years	67
11	30–40 years	17
1	Over 40 years ..	1

This shows a slight tendency towards the elderly primipara needing more assistance than the younger one. All types of people required the assistance of the Home as the following table shows:—

TABLE LVII

Baby	Occupation of the Father											
	Professional		Semi-Professional		Skilled Tradesman		Unskilled Tradesman		Single		Retired	
	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.
1	7	6	31	28	40	36	15	14	7	6	0	..
2	8	4	22	11	46	23	18	9	4	2	2	1
3	11	3	11	3	46	13	28	8	4	1	0	..
Over 3 ..	9	4	2	1	46	22	29	14	11	5	4	2

It is interesting to note that the difficulties with babies in the larger families occurred mainly in the tradesman group.

Many babies of unmarried mothers were cared for in the Home. These illegitimate births account for 6 per cent. of the total babies born in the State (1960). The fact that 27 per cent. of the first babies are conceived before marriage (1960) may be in part responsible for the maladjustment problems that occur with first babies.

TABLE LVIII

No. of Child	Breast Fed		Artificially Fed		Reasons for Admission						State Child		Failure to Thrive		Allergy		Congenital Heart Disease, Mongol, &c.	
					Weaning		Vomiting		Preoperative Care									
	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.
1	62	56	18	16	5	4	6	5	3	3	3	3	0	..	2	2	1	1
2	44	22	16	8	6	3	14	7	10	5	0	..	2	1	2	1	6	3
3	11	3	64	18	3·5	1	3·5	1	0	..	3·5	1	11	3	0	..	3·5	1
Over 3	8	4	60	29	..	0	7	3	8	4	0	..	10	5	0	..	7	3

SANDGATE HOME

1,598 children were examined for the Sandgate Home and of these 1,304 were admitted.

An epidemic of measles which was confined to the Toddlers' Home reduced the admissions.

The opening of the Toddlers' and Babies' Home has enabled more families to be assisted. In 1959 only 952 children were looked after while the mother was in hospital compared to 1,598 this year.

TABLE LIX

SANDGATE ADMISSIONS

——	Main Home	Toddlers	Babies
Boys	432	147	252
Girls	347	126	
Total number of days children spent in the Home	16,984	5,453	5,458
Average duration of residence for each child	21·8	19·9	21·6
Yearly daily average	46·5	14·9	14·9
Total number of families admitted	338	205	..
Families returned once during the year	31	14	..
Families returned twice during the year	4	1	..
Number of children sent to Hospital	10	12	..
Number of children returned from Hospital	4	6	..

SOCIAL WELFARE SECTION

This year there has been a slight decrease in the Social Service and Home Visits.

——	1960–61	1961–62
Social Service visits	4,762	4,531
Number of newborns visited at home ..	996	850
Number of newborns visited in Brisbane Women's Hospital, St. Andrew's, Princess Alexandra, Corinda, Boothville and Mater Mothers Hospital ..	11,938	12,127
Number of test feeds given	83	69
Number of phenylketonuria tests ..	342	416

From 20th March, 1962, one of the ante-natal sisters has done visiting at the Mater Mothers Hospital.

For the last four (4) months of 1962 the Wacol Immigration centre has been conducted by the south side social service sister.

CORRESPONDENCE SECTION

There has been an increase in the number of birth notifications received, and a slight increase in letters received from mothers for advice re feeding and management.

Letters of advice have been sent to mothers in New Guinea, Suva and Northern Territory. These mothers have had babies in Queensland and are not able to attend health centres in their own district. There has not been so many visits from country mothers to this section this year. Some country mothers have called in with new babies born in Brisbane before returning home.

Notifications regarding newest method of immunization are included in the circular letters. The lists of births and deaths continue to be sent to the City Council's health department.

TABLE LX

CORRESPONDENCE

—	Year ending 30–6–62	Year ending 30–6–61
Number of Birth Notifications received	6,106	5,633
Number of Circulars posted—		
(1) Within reach of a Centre	2,638	2,259
(2) Not within reach of a Centre	3,566	3,394
Letters to correspondents in response to Circular Number 2	860	889
Letters of advice re feeding and management sent on request	1,673	1,564
Number of " Care of Mother and Child " sent on request	950	827
Number of pamphlets sent advising Immunisation	6,104	5,602
Number of Birthday Cards sent during the year	194	224
Number of telephone calls re feeding or management	690	528

ANTE-NATAL SECTION

During the year a total of 631 expectant mothers attended the departmental ante-natal clinics which are conducted at Woolloongabba, Fortitude Valley, Caboolture and as from June 1962, at Inala Heights. The mothers attending the clinics are confined at the public sections of the Brisbane Women's Hospital and Mater Mothers' Hospital. The attendances at the series of lectures given by the Sisters in Charge of Fortitude Valley and Woolloongabba totalled 1,218 and 157 expectant mothers saw the film series which was shown on four (4) occasions during the year at Fortitude Valley.

A survey was made of 160 multigravid mothers and 54 primigravid mothers who attended Woolloongabba to determine the duration of pregnancy. The mode was used instead of the mean as mothers who were more than 10 days overdue were admitted to hospital for induction of labour and the duration of pregnancy for the multigravid was found to be 285 days and for the primigravid was 283 days.

One very interesting case was a mother whose fourth child was her third baby suffering from phenylketonuria. One of these children is mentally defective but the other two are responding to treatment. Routine urine testing for phenylketonuria is still part of the routine examination of children attending the clinics.

TABLE LXI

ANTE-NATAL SECTION—CORRESPONDENCE

	1961–62
Circular letters forwarded to expectant mothers (No. 1)	6,178
Circular letters forwarded to expectant mothers (No. 2) re " The Expectant Mother " books	2,683
Response to circular letters	1,523
Serial letters to expectant mothers	11,890
Letters received from expectant mothers	576
Special letters of advice sent on request	345
Copies of " The Expectant Mother " sent on request	1,506
Requests from Country centres and hospitals for " The Expectant Mother " book	3,129
Copies of "Ante-natal and Post-natal Exercises " sent on request to expectant mothers	2,900
Requests from country clinics for "Ante-natal and Post-natal Exercises "	1,545
Copies of baby patterns sent on request	111
Copies of maternity belt patterns sent on request	37

TABLE LXII

SUMMARY OF ANTE-NATAL CASES

—	New Patients	Subsequent Visits	Post-natal Examination	Total	Talks to Mothers	Attendances at Films
Caboolture	42	273	33	348	..	..
Fortitude Valley	231	1,966	174	2,371	609	157
Woolloongabba	355	3,412	250	4,017	609	..
Inala	3	12	..	15	..	..

TABLE LXIII

NUMBER OF ANTE-NATAL PATIENTS—(A) Confined by 30th June, 1962
(B) Unconfined by 30th June, 1962

—	Woolloongabba		Fortitude Valley		Caboolture		Inala	
	Primipara	Multipara	Primpara	Multipara	Primipara	Multipara	Primipara	Multipara
Group A	96	289	41	173	6	31	..	..
Group B	32	115	25	70	..	14	1	27
Total	128	404	66	243	6	45	1	27

TABLE LXIV

Conditions seen in the Ante-Natal Patients

	Woolloongabba		Fortitude Valley		Caboolture		Inala	
	Primipara	Multipara	Primipara	Multipara	Primipara	Multipara	Primipara	Multipara
Hb. under 13 grammes per 100 mls. ..	65	203	33	105	1	10	1	13
Hb. under 10·8 grammes per 100 mls...	7	19	3	14	..	..	..	..
Toxaemia (home treatment)	46	96	29	53	1	8	1	3
Toxaemia (hospital treatment) ..	6	24	6	26	2	2	..	1
Morning sickness	47	164	25	120	2	21	..	7
Varicose veins	..	56	..	31	..	12	..	5
Vaginal discharge	6	38	6	50	..	2	..	6
Rh-ve (no antibodies)	12	51	9	35	..	9	..	3
Rh-ve (antibodies)	..	3	..	..	..	..	..	..
Threatened miscarriage	7	37	..	17	..	..	..	2
Miscarriage	3	6	..	4	..	1	..	..
Constipation	..	..	10	12	..	1	..	..
Post maturity	4	9	3	14	..	1	..	..
Cystocele	..	12	..	7	..	..	..	1
Rectocele	..	1	..	2	..	..	..	..
Prolapse	..	1	..	..	..	..	..	..
Retroversion	2	7	1	4	..	1	..	1
Hypertension	..	1	..	3	..	..	..	..
Toxaemia superimposed on hypertension	..	2	..	3	..	1	..	..
Urinary tract infection	14	30	6	22	..	7	..	2
Cystitis	..	2	..	..	..	..	..	..
Cardiac lesion	2	9	2	3	..	1	..	1
Miscellaneous	8	34	8	50	1	6	..	3
Stillbirth	..	3	..	..	..	1	..	..
Caesarean section	..	4	..	..	..	..	..	..
Twins	..	4	1	1	..	..	..	..
Twins stillborn	1	2	..	..	..	..	..	..
Asthma	..	1	..	..	..	..	..	..
Venereal disease	2	1	..	..	..	..	..	..
Non pregnant	3	12	..	..	..	1	..	..
Premature labour	..	..	..	1	..	..	..	..
Contracted pelvis	..	..	1	..	..	..	..	..
Glycosuria	..	1	..	..	..	..	..	..
Breech	..	1	..	..	..	..	..	..

TABLE LXV

Post-Natal Examinations

	Woolloongabba		Fortitude Valley		Caboolture		Inala	
	Primipara	Multipara	Primipara	Multipara	Primipara	Multipara	Primipara	Multipara
Number of patients seen	49	146	27	95	4	19	..	..
Hypertension	8	24	6	17	..	5	..	..
Retroversion	6	28	3	11	2	7	..	..
Subinvolution	10	12	4	15	1	2	..	..
Retained products	..	..	..	1	..	..	..	..
Vaginal discharge	1	3	..	1	..	..	..	..
Cystocele	..	4	6	2	..	1	..	..
Rectocele	1	2	..	1	..	..	..	..
Cystocele and retocele	..	8	..	3	..	..	..	..
Haemorrhoids	..	..	..	..	..	1	..	..
Urinary tract infection	..	..	..	1	..	1	..	..
Foetal abnormality	1	3	..	..	..	..	..	..
Phenylketonuria baby	..	..	..	1	..	..	..	..
Miscellaneous	..	..	..	..	1	1	..	..

SISTER LECTURER'S SECTION

The mothercraft teaching in the schools for the year 1961 was very satisfactory. Lessons were given to twenty-four (24) State high schools in the metropolitan area. In the country the sister in charge at Charters Towers centre gave lessons to forty (40) girls in the State high school there, and the sister in charge of the rail car to forty-one (41) girls in primary schools and convents in the towns which the rail car services.

The number of classes and pupils in the metropolitan schools shows a marked increase. It will be noted that in 1957 this attendance was 1,722 and in 1961 was 3,263.

The examination results show 90 per cent. of pupils who sat for the examination received certificates; three thousand and twenty-five (3,025) papers and two thousand nine hundred and forty-four (2,944) mothercraft projects were corrected in the metropolitan area, and eighty-one (81) projects in the country centres.

TABLE LXVI

MATERNAL MORTALITY

The maternal mortality rate was 0·76 per 1,000 live births compared with 0·68 in 1960. There were 28 deaths during the year, caused by diseases and accidents of pregnancy and childbirth. Of these 16 were due to complications of childbirth and 9 were due to diseases and accidents of pregnancy (excluding three abortions). The causes of the 16 deaths due to diseases and accidents of childbirth were as follows:—

Placenta praevia or antepartum haemorrhage	2
Retained placenta	1
Postpartum haemorrhage	2
Delivery with other trauma	3
Delivery with other complications	2
Puerperal pulmonary embolism	2
Puerperal eclampsia	2
Sepsis of childbirth and the puerperium ..	1
Cerebral haemorrhage in the puerperium ..	1

The cause of the 9 deaths due to diseases and accidents of pregnancy were as follows:—

Toxaemias of pregnancy	6
Pyelonephritis of pregnancy	1
Other complications of pregnancy	2

TABLE LXVII

A Comparison of Maternal Mortality, Queensland and Australia

Year	Maternal Deaths		Maternal Mortality Rate	
	Queensland	Australia	Queensland	Australia
1911	98	615	5·77	5·03
1921	108	643	5·31	4·72
1931	108	650	6·06	5·48
1941	92	490	4·28	3·64
1951	35	203	1·18	1·05
1956	29	119	0·89	0·56
1957	21	138	0·62	0·63
1958	16	111	0·47	0·50
1959	21	104	0·59	0·46
1960	24	121	0·68	0·53
1961	28	..	0·76	0·44

TABLE LXVIII

Maternal Mortality—Australian States
1959-1961

—	1959		1960		1961	
	No.	Rate*	No.	Rate*	No.	Rate*
New South Wales ..	54	0·67	56	0·69	42	0·48
Victoria	16	0·26	16	0·25	21	0·32
Queensland	21	0·59	24	0·68	28	0·76
South Australia ..	6	0·30	13	0·62	6	0·26
Western Australia ..	5	0·29	8	0·48	7	0·41
Tasmania	2	0·02	4	0·45	3	0·33
Northern Territory ..	..	..	..	..	..	..
Australian Capital Territory.. ..	..	..	..	..	..	..
Australia ..	104	0·46	121	0·53	107	0·44

* Rate per 1,000 live births

MATERNAL MORTALITY COMMITTEE

The maternal mortality rate in Queensland is high compared to that in other States (see Table LXVIII).

During the year a committee was formed to investigate all maternal deaths. Good co-operation on the part of the doctors, who confined the mothers who died, has resulted in 19 out of the 28 deaths occurring during 1961 being discussed, commented on and classified by the committee which consists of:—

Chairman: Dr. A. Fryberg, Director-General of Health and Medical Services.

Secretary: Dr. H. C. Murphy, Director, Maternal and Child Welfare Department.

Professor G. Shedden Adam, Professor of Obstretrics, University of Queensland.

Dr. K. Wilson, Medical Superintendent, Brisbane Women's Hospital.

Dr. R. Miller, Australian Medical Association.

Dr. Murray Elliott, College of Obstretricians and Gynaecologists.

Dr. H. P. Palethorpe, Australian College of General Practitioners.

Dr. R. Drake, Mater Mothers' Hospital.

Mr. S. Solomon, Government Statistician—who is available as required.

Dr. J. McFarlane, Deputy Director, Maternal and Child Welfare Department—who joined the Committee in December, 1961.

The questionnaire which is used was drawn up by a number of the committee who based it on the one used in New South Wales. It has proved very satisfactory. After the committee has discussed each case, the findings are sent to the doctor concerned. The classification used to determine the deaths that were preventable is the same as used in New South Wales.

A sub-committee made up of Professor Shedden Adam, Dr. Murray Elliott, Dr. R. Drake and Dr. K. Wilson, has prepared for publication a bulletin on eclampsia. This will be printed by the Health and Home Affairs Department and distributed to doctors throughout the State, with the Australian Medical Associations newsletter. A further bulletin on haemorrhage is being prepared at the present time.

HAEMOGLOBIN VALUES IN CHILDREN AND BABIES

During the year a survey on haemoglobin values was completed after five years research by Dr. Jean McFarlane. The object of this survey was to find the mean haemoglobin level in babies and children under 5 years of age; to analyse the response of minor degrees of anaemia to iron therapy; to find the iron preparation which gave the best response and to find the correlation between the haemoglobin levels in mothers during their pregnancy and their babies after delivery. Surveys have been made in other parts of the world but none in a sub-tropical area.

The Health and Home Affairs Department laboratory performed the haemoglobin estimations. The following groups were considered:—

2,544 Babies under 1 year (birth weight over 5 lb. 8 oz.)

822 Premature babies (birth weight 5 lb. 8 oz. and under).

277 Babies whose mother had attended the maternal and Child Welfare Clinics for ante-natal care.

385 Babies and children treated with oral iron.

1,147 "Pale" babies.

1,282 Expectant mothers.

This survey was made because the haemoglobin level in babies and children must be kept at its optimum level to ensure that there is an adequate supply of oxygen to all body tissues with the minimum of effort on the part of the body at all times. The clinical response of the child with a minor degree of anaemia is the finding that makes one realise that treatment of these children is desirable—muscle tone, appetites and vitality are all improved and healthier children are the result.

The results obtained can be summarised as follows:—

1. The haemoglobin level in babies whose birth weight was over 5 lb. 8 oz. dropped to a minimum level of 11·1 grammes per 100 mls. at 10 weeks of age. The level rose within the next 5 weeks to 11·7 grammes per 100 mls. and remained at this level during the first year of life.

2. The haemoglobin level in babies whose birth weight was 5 lb. 8 oz. and under dropped to a minimum level of 9·9 grammes per 100 mls. at 9 weeks of age. The level rose within the next 5 weeks to 10·7 grammes per 100 mls. and remained at this level during the first year of life.

3. Babies, whose mothers during their pregnancy had a haemoglobin level of 13·0 grammes per 100 mls. or who were given oral iron in an attempt to keep their level above 13·0 grammes per 100 mls., had a haemoglobin level 0·8 gramme per 100 mls. higher than babies whose birth weight was over 5 lb. 8 oz. Their lowest level of 11·9 grammes per 100 mls. was reached at 10 weeks of age.

4. Between 1 year of age and 4½ years of age there is a gradual rise in the haemoglobin level from 11·7 grammes per 100 mls. to 13·9 grammes per 100 mls.

5. During pregnancy, the maternal haemoglobin level after treatment does not reach the height of the post-natal reading. The average of the levels in the expectant mothers considered was:—

12·2 grammes per 100 mls. ante-natally before treatment
12·5 grammes per 100 mls. ante-natally after treatment
13·9 grammes per 100 mls. post-natally

6. A significant correlation (0·68) occurred between the haemoglobin level in the mother during the pregnancy and the level in the baby between 6 and 16 weeks of age. This means that a high maternal level ante-natally resulted in a high baby's level and a low maternal level ante-natally resulted in a low baby's level.

7. Although pale children are not necessarily anaemic, more are anaemic than are not anaemic. For this reason all pale children should be considered anaemic until it is proved otherwise.

8. Iron therapy is successful if commenced before 3 months of age.

9. The best way to give a mixture containing iron is in water before meals. If the iron is given with milk or food poor absorption occurs due to the insoluble phosphates and phytates which are formed.

10. Various iron preparations such as ferrous gluconate, ferrous succinate, ferric hydroxide and iron chelates were used to treat minor degrees of anaemia. All the preparations used gave practically the same response.

11. The haemoglobin levels below which iron therapy is necessary are:—

12·0 grammes per 100 mls. between 12 weeks and 1 year.

12·0–12·2 grammes per 100 mls. between 1 year and 2 years.

12·2–13·0 grammes per 100 mls. between 2 years and 3 years.

13·0–13·8 grammes per 100 mls. between 3 years and 4 years.

13·8–14·2 grammes per 100 mls. between 4 years and 5 years.

VITAL STATISTICS

For the year 1961 the infant mortality rate was 20·0 compared with 21·0 in the previous year.

There was one death from diphtheria in a child aged two years.

During the year 1961, 36,637 births were registered, an increase of 1,424 on the previous year. There were 18,863 males and 17,774 females born, giving a masculinity rate of 106·1. The natural increase of 23,881 was equivalent to 1·6 per cent. of the population. The birth rate for 1961 was 24·2 per 1,000 mean population compared with 23·6 in 1960.

MARRIAGES

Registrations of marriages in 1961 numbered 10,392, giving a marriage rate of 6·9 per 1,000 mean population, the same as in the previous year. Minors married numbered 5,629 comprising 1,303 males and 4,326 females.

INFANTILE MORTALITY

Deaths of infants aged under one year numbered 733, comprising 437 males and 296 females, compared with 740 in 1960. Compared with the previous year, the rate for the metropolitan area decreased from 18·3 to 16·7, the rate for the sub-tropical (non-metropolitan) area from 22·4 to 21·7, whilst the rate for the tropical area remained unchanged at 22·5 per 1,000 live births.

The total number of deaths due to prematurity (unqualified) was 141 compared with 140 in 1960. Deaths from prematurity since 1951 were as follows:—

1951	153
1952	187
1953	145
1954	185
1955	137
1956	188
1957	163
1958	139
1959	118
1960	140
1961	141

Compared with 1960, the metropolitan and tropical areas each recorded 3 fewer deaths from immaturity (unqualified), whilst in the sub-tropical (non-metropolitan) area the number of deaths increased by seven.

TABLE LXIX

CAUSES OF DEATHS OF PREMATURE (IMMATURE) INFANTS

——	1959	1960	1961
Immaturity unqualified	118	140	141
Ill-defined diseases peculiar to early infancy, with immaturity	22	33	45
Post-natal Asphyxia and Atelectasis, with immaturity	45	43	46
Intracranial and Spinal injury at birth, with immaturity	22	18	17
Other birth injury, with immaturity	24	45	18
Neo-natal disorders arising from Maternal Toxaemia, with immaturity	5	17	5
Pneumonia of newborn, with immaturity	7	5	6
Haemorrhagic diseases of newborn, with immaturity	2	3	7
Haemolytic disease of newborn, with immaturity	8	6	1
Nutritional Maladjustment, with immaturity	..	..	..
Immaturity with mention of any other subsidiary condition	8	5	6
Umbilical Sepsis, with immaturity	..	..	..
Other Sepsis of newborn, with immaturity	..	1	1
Diarrhoea of the newborn, with immaturity	..	..	..
Totals	261	316	293
Total under one year, with immaturity	261	316	293
Total under one month, with immaturity	259	315	291

TABLE LXX

CAUSES OF DEATHS IN INFANTS UNDER ONE MONTH OF AGE—QUEENSLAND, 1961

Cause	1960	1961				Increase or Decrease
		Metropolitan	Sub-Tropical (a)	Tropical	Total	
Immaturity (unqualified)	140	25	66	49	140	
Immaturity with mention of any other subsidiary condition	5	2	1	2	5	..
Congenital Malformations	99	27	35	22	84	−15
Post-natal Asphyxia and Atelectasis	75	30	24	24	78	+ 3
Intracranial and Spinal injury at birth	49	16	30	15	61	+12
Other birth injury	60	8	19	11	38	−22
Haemolytic diseases of newborn (Erythroblastosis)	18	4	8	8	20	+ 2
Pneumonia of newborn	18	3	7	6	16	− 2
Haemorrhagic disease of newborn	10	9	9	3	21	+11
Neo-natal disorders arising from Maternal Toxaemia	18	3	3	1	7	−11
Diarrhoea of newborn	..	1	..	2	3	+ 3
Other diseases peculiar to early infancy	46	34	16	6	56	+10
Total Pre-natal Causes	538	162	218	149	529	− 9
All other Causes	20	6	3	4	13	− 7
Totals	558	168	221	153	542	−16

(a) Excluding Metropolitan.

TABLE LXXI

CAUSES OF DEATHS IN INFANTS MORE THAN ONE MONTH, BUT LESS THAN TWELVE MONTHS OF AGE—QUEENSLAND, 1961

Cause	1960	1961				Increase or Decrease
		Metropolitan	Sub-Tropical (a)	Tropical	Total	
Immaturity (unqualified)	..	1	..	..	1	+ 2
Immaturity with mention of any other subsidiary condition	..	..	1	..	1	
Congenital Malformations	52	30	23	12	65	+13
Post-natal Asphyxia and Atelectasis	..	..	..	..	..	..
Other diseases peculiar to early infancy	3	..	2	1	3	..
Total Pre-natal Causes	55	31	26	13	70	+15
Bronchopneumonia, other and unspecified Pneumonia	30	11	14	20	45	+15
Gastroenteritis and Colitis	27	3	13	5	21	− 6
Lobar Pneumonia	8	1	2	..	3	− 5
Diseases of Pancreas	2	1	..	1	2	..
Meningitis, except Meningococcal and Tuberculosis	7	..	..	1	1	− 6
Accidents, Poisonings and Violence	14	3	8	4	15	+ 1
All other causes	39	12	13	9	34	− 5
Total Deaths 4 weeks and under 1 year	182	62	76	53	191	+ 9

(a) Exeluding Metropolitan.

TABLE LXXII

MAJOR CAUSES OF DEATH IN FIRST YEAR OF LIFE (QUEENSLAND, 1952–1961). PERCENTAGE OF TOTAL INFANT DEATHS

Year	Pre-maturity	Congenital Mal-formation	Birth Trauma	Post-natal Asphyxia	Pneumonia (except lobar)	Erythro-blastosis	Pneumonia of the Newborn	Gastro-enteritis and Colitis	Neo-natal Diseases arising from Toxaemia	Accidents and Violence
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1952	24·2	16·1	14·6	10·5	3·0	3·0	3·1	3·5	1·8	2·7
1953	18·9	18·9	16·0	10·5	4·1	3·5	3·7	4·2	3·3	1·8
1954	27·0	18·8	15·5	9·6	2·6	1·7	2·4	3·5	3·3	1·4
1955	21·5	19·5	16·3	10·0	4·3	3·5	3·3	3·2	2·1	1·5
1956	25·7	18·3	12·5	8·4	7·7	3·4	2·2	3·1	2·0	1·8
1957	22·4	18·0	14·6	7·9	6·3	3·3	3·7	2·4	1·4	3·0
1958	21·6	17·2	16·4	9·3	5·6	3·2	2·6	2·3	1·4	2·1
1959	17·5	21·5	14·7	9·4	4·7	2·9	2·5	2·9	1·0	3·3
1960	19·6	20·4	14·9	10·1	4·1	2·4	2·4	3·6	2·4	2·2
1961	20·1	20·3	13·6	10·6	6·1	2·9	2·2	2·9	1·0	2·2

TABLE LXXIII

CAUSES OF DEATHS IN INFANTS UNDER ONE YEAR—QUEENSLAND, 1961

Cause	1960	1961				Increase or Decrease
		Metropolitan	Sub-Tropical (a)	Tropical	Total	
Immaturity (unqualified)	140	26	66	49	141	+ 2
Immaturity with mention of any other subsidiary condition	5	2	2	2	6	
Congenital Malformations	151	57	58	34	149	− 2
Post-natal Asphyxia and Atelectasis	75	30	24	24	78	+ 3
Intracranial and Spinal injury at birth	50	16	30	15	61	+11
Other birth injury	60	8	19	12	39	−21
Haemolytic disease of newborn (Erythroblastosis)	18	4	9	8	21	+ 3
Pneumonia of newborn	18	3	7	6	16	− 2
Haemorrhagic disease of newborn	10	9	9	3	21	+11
Neo-natal disorders arising from Maternal Toxaemia	18	3	3	1	7	−11
Diarrhoea of newborn	..	1	..	2	3	+ 3
Other diseases peculiar to early infancy	48	34	17	6	57	+ 9
Total Diseases of early infancy	593	193	244	162	599	+ 6
Bronchopneumonia, other and unspecified Pneumonia	30	11	14	20	45	+15
Gastroenteritis and Colitis	27	3	13	5	21	− 6
Lobar Pneumonia	8	1	2	..	3	− 5
Diseases of Pancreas	4	2	1	1	4	..
Meningitis, except Meningococcal and Tuberculosis	9	1	1	1	3	− 6
Accidents, Poisonings and Violence	16	3	8	5	16	..
All other causes	53	16	14	12	42	−11
Total Deaths under 1 year	740	230	297	206	733	− 7

(a) Excluding Metropolitan.

TABLE LXXIV

DEATHS OF INFANTS UNDER 1 YEAR OF AGE FROM CONGENITAL MALFORMATIONS

Congenital Malformations	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Monstrosity	10	10	4	7	11	7	8	6	8	4
Spina bifida and meningocele	17	24	18	13	14	17	10	18	20	16
Congenital hydrocephalus	3	7	8	10	13	11	14	12	8	16
Nervous system	3	6	4	5	3	3	5	2	5	5
Circulatory system	43	45	51	54	47	59	47	73	72	77
Cleft palate and harelip	1	2	..	1	2	1	2	2	..	2
Digestive system	39	28	28	24	25	26	16	18	16	11
Genito-urinary system	3	3	2	5	7	2	3	6	9	7
Bone and joint	1	..	..	4	1	..	2	3	1	2
Unspecified	5	4	6	5	12	6	6	15	12	9
Total	125	129	121	128	135	132	113	155	151	149
Percentage of infant deaths	16·1	18·9	18·8	19·5	18·3	18·0	17·2	21·5	20·4	20·3

Does not include congenital mental deficiency, hernia, mucoviscidosis.

The percentage of infant deaths due to congenital abnormalities is still high (20·3 per cent.). An analysis of the types of abnormalities causing deaths over the last 10 years reveals three interesting points:—

(1) The number of deaths due to congenital malformations of the circulatory system has increased from 34 per cent. to 52 per cent.

(2) The number of deaths due to congenital malformations of the digestive system has decreased from 31 per cent. to 7 per cent.

(3) The number of deaths due to congenital hydrocephalus has increased from 2·4 per cent. to 11 per cent.

Advances in surgery in these three fields have been made during the last 10 years and may be responsible for the reduced number of deaths from congenital malformations of the digestive system. A further investigation of congenital malformations discovered at birth is necessary before any conclusions can be made about the trend of abnormalities.

Deaths of children aged one year and under five years

(*a*) Deaths of children aged one year and under two years during the year 1961 numbered 57, representing a death rate of approximately 1·6 per 1,000 children in that age group. There were 82 deaths in 1960.

The chief causes of death were:—

Accidents	9
Pneumonia—	
Other	4
Bronchopneumonia	9
}	13
Congenial malformations	9
Malignant Neoplasms	3

Of the 9 deaths (5 males, 4 females) due to accidents, three were caused by accidental poi oning, and three by drowning. Of the three deaths due to accidental poisoning, two were caused by petroleum products and one by a corrosive substance.

(*b*) The deaths of children aged two and under five years during the year numbered 77, representing a death rate of approximately 0·8 per 1,000 children in that age group. Deaths in 1960 were 78.

The chief causes of death were:—

Accidents	21
Malignant Neoplasms	13
Pneumonia (all kinds)	7
Acute infectious encephalitis	5
Congenital malformations	4

Of the 21 deaths due to accidents, five were caused by motor vehicle accidents and five by drowning.

TABLE LXXV

ACCIDENTAL DEATHS OF CHILDREN (AGED 1 AND UNDER 15 YEARS)

—	1956		1957		1958		1959		1960		1961		Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Road Accidents	14	9	20	9	18	13	24	11	17	13	16	19	183
Firearms	3	..	..	..	3	1	6	..	2	1	1	..	17
Drowning	21	5	16	6	13	13	19	7	11	6	18	3	138
Falls	5	2	1	1	1	1	1	2	2	1	..	..	17
Other Accidents	19	17	25	11	21	9	22	14	19	22	31	4	214
	62	33	62	27	56	37	72	34	51	43	66	26	569
Totals	95		89		93		106		94		92		569

In 1961, thirty-five deaths (16 males and 19 females) in this age group were caused by road accidents. The total number of deaths was 92—2 fewer than the previous year.

Accidental deaths of children aged one and under fifteen years

Accidental deaths of children in this age group numbered 92 in 1961 compared with 94 in 1960, an average of 91 in the ten years 1952 to 1961 inclusive. The total deaths of children in this age group from all causes were 266, of which almost 35 per cent. were caused by accident.

DIVISION OF SCHOOL HEALTH SERVICES

Chief Medical Officer: P. R. PATRICK, M.B., B.S. (Qld.), D.P.H. (Syd.)
Medical Officer: G. M. S. MAY, M.B., B.S. (Melb.)
Chief Dental Officer: T. D. PUGH, L.D.S. (Eng.), L.D.Q.

GENERAL OUTLINE OF YEAR'S ACTIVITIES

During the year the work of the Division fell into three major categories. School Health Services medical officers and sisters continued their routine medical examinations of primary school children; the school dentists carried out dental examinations and treatments in country areas in Queensland and the Division was responsible for the distribution of Salk Vaccine throughout Queensland.

One aspect of child health that has been somewhat neglected in the past is that of emotional health. This is gradually being remedied. School Health Services is aware of the need for improvement in this field and is making use of the recently established Welfare and Guidance Clinic in Brisbane by referring to it children who are emotionally disturbed. In addition, school sisters are receiving a limited training at this clinic.

ROUTINE SCHOOL HEALTH EXAMINATIONS

The aim of routine examination of school children is to detect previously unknown physical and mental defects and to urge parents to obtain treatment for them when this is indicated. Pupils are examined three times during their primary school career. Priority is given to the examination of children commencing school. Where a medical officer is employed, he examines all children in the first grade, as well as those in other grades referred to him by the school sister, teachers and parents. During the year, school sisters visited 797 country and 86 metropolitan schools. At these 883 schools, 98,952 school children were examined. Medical officers conducted 7,941 examinations. As a result of these examinations parents were advised of defects in 4,190 children. A small number of these children had more than one defect. The number of children referred in this manner represented 4·2 per cent. of all examined.

With the passage of time, the importance with which pediatricians view certain defects undergoes change. When school health examinations commenced in Queensland in 1911, over 25 per cent. of children examined were regarded to be in need of treatment for diseased tonsils and adenoids. At the present time, children are only referred for this defect if they have a continuing history of relevant symptoms in addition to signs of disease. In the past year less than 0·3 per cent. of children were referred for this complaint. Less emphasis than previously is now placed on orthopaedic and postural variations. Some conditions, which were previously regarded as abnormal, are now considered to be normal physiological variants. It is now seldom that one sees corrective measures taken for the condition of knock-knee.

Two defects which are at present regarded as important in their influence on a child's educational progress are those of deafness and defective vision. Testing for these two conditions is part of the routine school health examinations. Hearing tests are conducted with portable pure tone audiometers supplied by the Commonwealth Acoustic Laboratory. During the year, children with newly discovered hearing defects totalled 568. In most cases, these children did not have such severe deafness that special education was indicated, but the defect was sufficient enough to warrant treatment and advice to teachers regarding the positioning of the child in the class.

Dentists reported that of 31,443 children examined only 1,482 had naturally sound mouths. Another 6,089 children needed no dental attention, but their teeth had been attended to previously. This means that at the time of the examinations 23,872 children, or 75 per cent. of the total, were suffering from untreated dental caries. This defect is by far the most prevalent of all physical defects found in Queensland children. The next most prevalent is that of defective vision. During the year, 1,991 children were found to have untreated defective vision. A further 390 children were suffering from other eye defects, including strabismus. Other important defects found included those of the nose and throat, postural, orthopaedic, hernias and heart conditions.

School health examinations would be of little use if no action were taken to remedy the defects found. After parents have been advised of conditions needing attention, checks are made to ascertain whether action has been taken by parents to obtain medical attention for their children. The co-operation of Head Teachers in this regard is greatly appreciated. An analysis of returns concerning more than 4,000 children recommended for further medical examination, shows that 86 per cent. of parents sought further professional advice after being advised of their child's defect. This figure is very pleasing as it is a conservative estimate of the response of parents. The period of two months (the time when checks are made) is sometimes not sufficient for appointments to be made, particularly in country areas, and the actual percentage of children who are medically treated as a result of notification is, no doubt, higher than that quoted.

COMMUNICABLE DISEASES IN SCHOOL CHILDREN

One of the accepted disadvantages of children attending school in groups is the possibility that they will contract a communicable disease. Over the years the number of epidemics of serious disease has decreased. Today the disease which causes the greatest absenteeism in school children is upper respiratory tract infection. Next in importance are the common childhood virus diseases such as measles, chickenpox and mumps. These occur at periods varying from every two or three years in the cities to much larger intervals in country areas.

From notifications received by the Director-General, the only notifiable disease occurring in any great incidence was infectious hepatitis, of which 328 cases were reported in school children. Our present preventive measures of attention to personal hygiene, such as hand washing after the use of the toilet and before food preparation seem to have little effect on the course of the disease. The news that the causative virus has been isolated is very welcome and no doubt a preventive vaccine will soon be available. The only other notifiable diseases which occurred in any magnitude amongst school children were scarlet fever (70 cases), poliomyelitis (67 cases), and rheumatic fever (53 cases). Today scarlet fever is not a serious disease. The poliomyelitis cases were part of the first epidemic of any serious consequence since the beginning of Salk Vaccination Campaign. The epidemic is reviewed under the Division of Public Health Supervision.

Low figures were recorded for diphtheria (2 cases) and tetanus (3 cases). These low figures are, it is felt, due to the immunisation campaigns conducted by Local Authorities and private practitioners. There is, however, no reason for complacency and a study of the immunisation status of school children reveals a disquietening fact. From figures returned by school sisters after examining the medical history of children in the first grade at school, it is noted that while 92 per cent. of these children had received primary immunisation, only 45 per cent. had received reinforcing injections. Unless this state is corrected, an increase in cases in the older age groups may occur.

The Division of Tuberculosis continued its programme of tuberculin testing of school children. Officers from that Division included in this testing not only children from schools in Brisbane and Ipswich, but extended this activity to country schools in the Gympie and Bundaberg districts. The percentage of positive reactors varied from 16·1 in Brisbane to 39·9 in the Bundaberg area. As indicated in the report of the Division of Tuberculosis, most of the positive reactors were not exposed to tubercle bacilli but to allied organisms.

Gatton Agricultural College was visited during the year to carry out tetanus immunisation amongst students and staff.

It is pleasing to report that very little time is now required by school sisters to carry out cleanliness surveys to detect cases of scabies, impetigo and pediculosis. Some cases did occur, but the incidence was negligible.

SURVEY OF ASTHMA IN SCHOOL CHILDREN

A survey of asthma in school children commenced in the previous year at the suggestion of Dr. E. H. Derrick, Director of the Queensland Institute of Medical Research, was completed. The aims of the survey were twofold, viz.:—

(1) To determine the comparative incidence of asthma in key localities in Queensland.

(2) To determine to what extent the variation in incidence is associated with latitude, altitude, temperature, humidity and rainfall.

The survey was conducted by analysing the medical history sheets completed by parents at the time pupils in Grade One are examined at school. Altogether the medical histories of 16,662 children in 595 schools throughout Queensland were

investigated. In 891 cases parents stated their children suffered from asthma. The incidence was found to be higher in boys (6·4 per cent.) than in girls (4·2 per cent.). In determining the incidence in the various centres in Queensland, only those children who had been born in a town and were still living there were included.

Two climatological factors which might influence asthma are altitude and humidity. From overseas study there is general agreement that an altitude over 4,500 feet is beneficial. Humidity encourages the growth of pollens and moulds, the presence of which in the atmosphere is likely to precipitate an attack.

The incidence of asthma in school children and relevant climatological details of various centres in Queensland are given in Table LXXVI. These results were analysed by Dr. H. Silverstone, Senior Lecturer in Medical Statistics, at the University of Queensland. Dr. Silverstone commented as follows:—"I find small negative (non-significant) correlations of —·15 and —·20 between asthma incidence and altitude and temperature respectively. There was rather surprisingly a significant negative correlation with humidity, —·45, indicating that areas of high humidity tend to have lower asthma incidence. There was a similar negative correlation of —·40 with rainfall. Due to the correlation between rainfall and humidity this was to be expected."

The fact that the negative correlation between asthma incidence and altitude is not significant probably indicates that while there is a slight trend in Queensland for asthma to be less at high altitudes, no place in Queensland is really high enough to influence the disease.

The negative correlation between asthma and humidity is surprising, in view of the opinion already expressed that moulds and pollens which might produce asthma are more prevalent at the higher humidities. The figures used in this analysis are average annual figures. Further investigation of the incidence of asthmatic attacks at various periods of the year and comparison of this incidence with humidity readings at the particular time may help to determine whether humidity does have a bearing on attack rate.

In the meantime one would hesitate to say dogmatically that any one place in Queensland would be beneficial to asthma sufferers.

CO-OPERATION WITH OTHER AGENCIES

During school health examinations many children are found who need further investigations to determine an exact diagnosis and to ascertain whether special education is indicated. It is necessary therefore for School Health Services to elicit the aid of many other departments and health agencies.

Liaison between this branch and the Commonwealth Acoustic Laboratories has helped many a child medically and educationally. The Laboratories provide this branch with the portable audiometers used for testing school children for deafness, examine children at their full time clinic in Brisbane, and during periodic visits to Rockhampton, Townsville and Cairns. Hearing aids are provided and fitted free of charge. All children admitted to the Education Department's Oral Deaf School are first examined by an Ascertainment Committee, of which the Chief Medical Officer is a member.

Many children were referred to the Research and Guidance Branch of the Education Department during the year. This section determines the need for special education for those children not progressing normally in their schooling. Most of these children are found to be normal physically at school health examinations and no medical treatment will correct a lowered intelligence quotient which is the cause of the slow progress in most instances.

The recently established Division of Social Work has helped School Health Services in solving many problems associated with school children during the year.

Medical officers from School Health Services have assisted the Institute of Child Health in the training of final year Medical Students at handicapped children's institutions. Entrants to both Teachers' Colleges were medically examined by the staff of School Health Services.

SCHOOL DENTAL SERVICE

The School Dental Service continued with its policy of giving priority of service to children attending schools situated in areas not serviced by hospital board dental clinics. As a general rule, school dentists visit only those schools situated outside a radius of fifteen miles from permanent clinics. The four rail dental clinics serviced schools on the Atherton Tableland and Western Queensland. Schools visited by dentists attached to these clinics included Forayth, Mt. Molloy, Winton, Dajarra, Blackall, Isisford, Dulacca, Meandarra and many other schools in distant parts of Queensland. Other school dentists use official and public transport to visit schools in their areas. The plan to equip all school dentists with official vehicles is gradually being implemented and two new vehicles were purchased during the year. Attention is also being paid to the improvement of dental equipment used by school dentists. Foot engines have been replaced by portable electric motors and new electric sterilizers have been purchased. Despite this improvement in transport and equipment, it is still necessary for many operative sessions to be performed in makeshift surgeries on school verandahs. School dentists carry out very creditable work under difficult conditions.

Details of work performed by school dentists is given in Table LXXX. At 414 schools visited, dentists carried out 60,038 operations. During a school dental inspection, information is collected regarding the number of children under regular dental care, either privately or through the public dental services. Of 31,443 children examined, 18,890 children were under regular dental care. This leaves 12,553, or approximately 40 per cent. of children who do receive regular dental care. Some, no doubt, seek emergency treatment. If this proportion is applicable to the 260,000 children in primary schools in Queensland, it means that over 100,000 Queensland children are not receiving regular dental attention.

SALK VACCINATION CAMPAIGN

School Health Services is responsible for the distribution of Salk vaccine to Local Authorities and private practitioners throughout Queensland. In Brisbane, the Commonwealth Department of Health kindly handle the vaccine for private doctors, after the necessary authorities have been issued by the Salk Campaign office. Country private practitioners receive their vaccine when bulk supplies are despatched to Local Authorities.

For the greater part of 1961, supplies of Salk vaccine were unavailable and when stocks did arrive, the amount was so small that a priority of preference for children had to be enforced. Unfortunately this hold-up in supplies which was due to technical difficulties experienced by the Commonwealth Serum Laboratories, coincided with an increase in the number of cases of poliomyelitis. Adequate amounts of vaccine were available from the beginning of 1962 and all Local Authorities and many private practitioners took advantage of this and recommended vaccination campaigns. In the Metropolitan Area, the Brisbane City Council, which had restricted its campaign to children, took over the adult vaccination campaign from the State Health Department. After an early rush of adult applicants to be vaccinated, the response fell away and the final number vaccinated in the Metropolitan Area was disappointing.

Early in 1961, the Commonwealth Serum Laboratories, made available a Quadruple Antigen to give protection against diphtheria, tetanus, whooping cough and poliomyelitis. With the unavailability of Salk vaccine, the anti-poliomyelitis component was then lacking and this new product could no longer be supplied. Children who had commenced immunisation with Quadruple Antigen continued their courses with Triple Antigen and Salk vaccine. Even when Quadruple Antigen was available there was a division of opinion regarding its use. This arose due to recommendations regarding the age of commencing immunisation. The worst effects of whooping cough occur in the early months of life and for this reason most authorities agree on an early commencing age. This Department recommends a commencing age of three months. Some paediatricians advocate an earlier age still.

The recommended age of commencing immunisation with Quadruple Antigen and Salk vaccine is six months. Maternal antibodies already present in the child's blood stream might interfere with the response before this age. This commencing age of six months will not give the desired earlier protection against whooping cough. For this reason, the National Health and Medical Research Council has recommended against resumption of Quadruple Antigen production.

Although the adult response to immunisation was not high, the number of children vaccinated since supplies became available again has been satisfactory. Prior to the breakdown, the majority of children in the older age groups had been vaccinated and the bulk of immunisation lies in new children being born each year. The number of first injections given to children during 1961-62 was 46,277. This number exceeds the annual births in Queensland by approximately 10,000. The back lag caused by lack of vaccine has been overcome to some extent. From an analysis of records, it is estimated that approximately 87 per cent. of children eligible have commenced immunisation, and 74 per cent. have received three injections. The adult response is still not satisfactory. Approximately 50 per cent. of adults over twenty years of age have received three injections.

After representations from Queensland, the National Health and Medical Research Council has recommended that a fourth injection of Salk vaccine be administered twelve months after the third injection. All Local Authorities have signified their willingness to carry out this recommendation and it is believed that the responsible will be satisfactory at least in school children.

TABLE LXXVI

GIVING DETAILS OF CLIMATE AND THE PERCENTAGE OF ASTHMA SUFFERERS IN GRADE I CHILDREN IN VARIOUS CENTRES IN QUEENSLAND

Centre	Percentage of Asthma Sufferers	Latitude	Altitude (in Feet)	Average Daily Mean		Average Yearly Rainfall
				Temperature (Farenheit)	Relative Humidity	
		Deg. Min.		Deg.	Per cent.	Points
Southport	6·6	27 59	16	68	72	5,377
Brisbane	6·5	27 28	137	69	68	4,009
Ipswich	8·4	27 38	64	68	65	2,897
Toowoomba	5·3	27 33	1,921	62·5	74	3,519
Dalby	4·7	27 32	1,131	66·3	61	2,506
Roma	4·3	26 32	1,010	68·5	55	2,043
Charleville	7·7	26 25	965	70·4	49	1,797
Central West	5·1	23 27	612	74	49	1,554
North West	6·5	20 37	1,000	75·6	42	1,650
Warwick	7·6	28 14	1,485	63·6	65	2,508
Stanthorpe	1·1	28 40	2,656	59·3	68	2,682
Gympie	6·0	26 11	309	68·6	72	4,329
Burnett	7·7	26 40	1,132	63·8	71	2,807
Maryborough	3·2	25 32	27	70	74	4,543
Bundaberg	8·1	24 53	45	70	73	4,237
Gladstone	9·4	23 50	13	71·6	73	3,827
Rockhampton	3·7	23 24	37	73·2	66	3,736
Mackay	4·5	21 06	45	71·4	83	6,073
Bowen	2·3	19 59	16	75·1	73	3,637
Ayr	1·3	19 36	24	74·4	72	3,756
Townsville	3·5	19 14	73	76·0	70	4,306
Innisfail	1·8	17 32	22	73·9	84	13,915
Cairns	5·0	16 55	16	76·3	76	8,635
Atherton	0·8	17 17	2,466	68·1	77	5,399
Ingham	1·3	18 35	20	73·6	83	7,700
Goondiwindi	7·9	28 33	720	67·8	58	2,252

TABLE LXXVII

DETAILS OF ROUTINE SCHOOL HEALTH EXAMINATIONS

Particulars	Metropolitan	Country	Total
Schools Visited	86	797	883
Children Examined	30,975	67,977	98,952
Children Examined by a School Medical Officer	6,710	1,231	7,941
Children with Defects Requiring Notification	1,234	2,956	4,190
Percentage of Parents who had sought Medical Attention two months after Notification	87	84	86

TABLE LXXVIII

APPARENT DEFECTS NOTIFIED

Defect	Metropolitan	Country	Total
Hearing Loss	116	452	568
Defective Vision	601	1,390	1,991
Other Eye Defects	110	280	390
Infected Tonsils	72	211	283
Scrotal and Groin Swellings	124	200	324
Postural Defects	25	78	103
Lower Limb Defects	64	159	223
Cardiac Defects	39	2	41
Other Defects	136	352	488

TABLE LXXIX

COMMUNICABLE DISEASE IN SCHOOL CHILDREN

Diphtheria	2	Meningitis	23
Scarlet Fever	70	Tetanus	3
Poliomyelitis	67	Rheumatic Fever	53
Lead Poisoning	1	Infective Hepatitis	328
Malaria	4	Psittacosis	3

TABLE LXXX

DETAILS OF SCHOOL DENTAL EXAMINATIONS

Number of children examined	31,443
Number notified for professional attention	7,933
Number of children under regular dental care—	
Clinic	902
School Dental Officer	8,546
Private Dentist	9,442
Number with sound mouths—	
Natural	1,482
Operatively restored	6,089
Carious permanent teeth (saveable)	38,476
Carious permanent teeth (unsaveable)	6,096
Carious temporary teeth	38,279
Permanent teeth lost or extracted	15,603
Six year molars extracted	10,191
Permanent teeth filled	66,072
Temporary teeth filled	26,505
Percentage of children with dirty mouths	11·3
Total number of defective permanent teeth	34,572
Average number of defective permanent teeth, per child	1·1

Total Dental Treatment 1961

Number of schools visited	414
Number of children examined	31,443
Number of children treated	12,878
Number of extractions	12,697
Number of fillings	28,895
Number of other treatments	13,100
Number of operations	60,038

TABLE LXXXI

SALK VACCINATION CAMPAIGN

INJECTIONS GIVEN DURING 1961–62

—	First Injections	Second Injections	Third Injections	Total
Children (up to 14 years)	46,277	41,951	29,529	117,757
Adults (15 years and over)	51,680	47,053	7,374	106,107
Totals (all ages)	97,957	89,004	36,903	223,864

INJECTIONS GIVEN FROM BEGINNING OF CAMPAIGN TO 30TH JUNE, 1962

—	First Injections	Second Injections	Third Injections	Total
Children (up to 14 years)	528,826	492,946	449,559	1,471,331
Adults (15 years and over)	336,822	320,233	246,785	903,840
Totals (all ages)	865,648	813,179	696,344	2,375,171

DIVISION OF MENTAL HYGIENE

Director of Mental Hygiene: B. F. R. Stafford, M.B., B.S. (Melb.), A.B.P.S.

Medical Superintendent, Brisbane Mental Hospital: C. R. Boyce, M.B., Ch.M. (Syd.)

Medical Superintendent, Toowoomba Mental Hospital: J. H. B. Henderson, M.B., B.S. (Syd.)

Medical Superintendent, Ipswich Mental Hospital: R. A. Atherton, L.R.C.P. (Edin.), L.R.C.S. (Edin.), L.R.F.P.S. (Glasgow)

Psychiatrist, Psychiatric Clinic: J. A. Hede, M.B., B.S. (Melb.), D.P.M. (Melb.)

Visiting Medical Officer, Mosman Hall, Charters Towers: I. Cserey, M.B., B.S. (Melb.)

Superintendent, Epileptic Home: E. G. Kenyon

Administration Officer: A. C. McAllister, B.Com.

During the past financial year the Commonwealth Government has extended its capital subsidy of £1 for £2 to psychiatric facilities in general hospitals not used for the accommodation of patients.

It is considered that as the Commonwealth capital subsidy was granted primarily to relieve over-crowding in mental hospitals, increased accommodation in psychiatric facilities associated with general hospitals, must give considerable relief to mental hospital accommodation and should therefore rank for capital subsidy.

OPEN HOSPITALS

The policy of open wards has further developed. In the Brisbane Mental Hospital there has been greatly increased activity among the staff in organising ward welfare committees and social clubs.

Toowoomba Mental Hospital has embarked on a programme of improving the living and social conditions of its eight open wards.

Mosman Hall has an open Annexe, and its policy of ground and town parole minimises the security that is necessary for some of its 179 residents.

Wacol Pavilion has a small area enclosed to safeguard wanderers and now all Repatriation patients live in the Pavilion. This closed area has made it possible for all the wards and gates to be open, and to replace the original custodial fence with a domestic type fence merely to define the area.

THE CHAPLAINCY SERVICE

At an impressive ceremony at Brisbane Mental Hospital three Chapels were handed over to the respective Church Authorities. On the commemoration cairn is the following inscription—

"Commemoration Cairn.

These Chapels were erected by the Government of Queensland and dedicated to the Chaplaincy Service of the Brisbane Mental Hospital. This plaque was unveiled by the Hon. H. W. Noble, M.B., B.S., M.L.A., Minister for Health and Home Affairs, on 29th November, 1961."

Appreciation is expressed for the combined help of the Church Authorities represented by the Chapels and to others who interest themselves in the spiritual welfare of patients in all our mental hospitals.

ASSOCIATIONS AND AMENITIES

The Queensland Federation of Mental Health has completed its first full year, which proved most successful. Many more amenities are being provided for patients. A "Poinciana Festival" which is intended to be held annually at the Brisbane Mental Hospital was opened by His Excellency the Governor.

Thanks are expressed to the Federation, its affiliated organisations and the many friends who have helped during the year.

MENTALLY SUBNORMAL

School rooms were built at Farm Colony, Wacol, and, since January 1962, three (3) full-time specially trained teachers have undertaken the teaching and training of the subnormal children. This is part of a wider plan that links the community services of the Association for the welfare of the mentally subnormal with the special assessment unit at Chermside for the pre-school subnormal child, and with the facilities at Wacol and Ipswich Mental Hospital.

The development must proceed to include vocational training for the older children and strong ties with sheltered workshop facilities and community placement services.

GERIATRIC PATIENTS

Actual accommodation problems in respect to these patients appear to have been solved. There is real need to develop a more active regime of medical and nursing care, similar to the Geriatric Unit at Princess Alexandra Hospital. Elderly patients who have to be admitted to mental hospitals should be cared for in such a way that their admission to Annexes or Eventides could be expedited. It is unsatisfactory that a number of elderly patients are still being admitted to mental hospitals essentially for the purpose of assessment and selection for geriatric facilities elsewhere. A unit associated with a general hospital should be established for this purpose. At June 30th, 1962, 543 males and 813 females (total 1,356 patients) had been admitted to Annexes or Eventides from the Mental Hospitals.

ACCOMMODATION

There are 520 vacant beds throughout the mental hospitals (Brisbane Mental Hospital 250, Toowoomba Mental Hospital 147, Ipswich Mental Hospital 57, Mosman Hall, Charters Towers 66—Includes a new ward of 30 beds not yet occupied).

It may be possible to reorganise at least some of this vacant accommodation so that the Brisbane Mental Hospital can provide services for various groups of seriously handicapped people and who at present have not access to satisfactory care. The future may find the Brisbane Mental Hospital Reserve developing into an area of multiple institutions, each offering an essential service to the community.

TABLE LXXXII

Patient Population

	Patients Resident at 30th June, 1961			Patients Resident at 30th June, 1962		
	Females	Males	Total	Females	Males	Total
Brisbane Mental Hospital	737	1,139	1,876	679	1,123	1,802
Toowoomba Mental Hospital	534	544	1,078	507	517	1,024
Ipswich Mental Hospital	325	339	664	282	324	606
Mosman Hall, Charters Towers	..	198	198	..	169	169
Totals	1,596	2,220	3,816	1,468	2,133	3,601

The total number of patients resident in all mental hospitals shows an interesting trend (1960—3,949; 1961—3,816; 1962—3,601). This has been largely due to the treatment of more patients in the community as the total number of patients on the books in 1962 is practically the same as in 1961.

The number of patients admitted has increased.

Year	Brisbane Mental Hospital	Toowoomba Mental Hospital	Ipswich Mental Hospital	Mosman Hall, Charters Towers	Totals
1961	947	257	43	100	1,347
1962	1,203	271	44	89	1,607

CONSTRUCTION

Brisbane Mental Hospital

The new store is in operation, permitting the occupational centre to resume its previous extensive activities.

A new fitters' shop has been completed.

Toowoomba Mental Hospital

The Chest Hospital Unit is almost completed. Work has commenced on an occupational therapy centre and a recreation room for Female Ward 1.

Ipswich Mental Hospital

Extensive alterations to Male Ward 3 to provide adequate facilities for the care and treatment of severely subnormal male children are well advanced.

Female Ward 2 has been excised from the Institution and as Moreton House will provide a special female unit for the State Children Department.

Mosman Hall, Charters Towers

A new ward of 30 beds has been completed, and apart from minor items it ready for occupation.

General Hospitals

The Neuropsychiatric Hospital at Chermside should be ready for occupation in a matter of months.

Work should commence immediately on additional psychiatric facilities at the Brisbane General Hospital, and on a regional psychiatric unit for Townsville.

It is hoped that work will soon commence on the psychiatric unit at Princess Alexandra Hospital.

CRIMINALLY MENTALLY SICK PATIENTS

It has been approved in principle that these patients will be cared for in a psychiatric unit within the Prisons Service. These patients are primarily custodial responsibilities and their care in a modern mental hospital inevitably retards the development of open wards, and, of course, makes it impossible to open others. More serious is the effect on medical and nursing staff who must be trained in the careful custody of the mentally sick criminal and yet be able to absorb the philosophy of open wards when allotted there for duty.

STAFF

Drs. I. Waga, W. P. Hurley, W. Leggat, I. Apel and S. Gottlieb resigned from, and in their place Drs. J. Trout, N. Cominos, B. Klug, J. Gataker and W. S. Wright were appointed, to the Brisbane Mental Hospital.

Dr. Gorst resigned from, and Dr. N. G. Hamilton was appointed to, Toowoomba Mental Hospital.

PSYCHIATRIC CLINIC

The psychiatric clinic has introduced the International statistical classification of diseases, injuries and causes of death which is the classification used by the Commonwealth Statistician. This system will be used by the other Institutions of this Division next financial year.

Forensic psychiatry continues to take a considerable amount of time of officers of the Clinic. This is necessary work, but it does reduce the number of other patients that can be treated.

Liaison between the Psychiatric Clinic and the Welfare and Guidance continues to be close in the clinical field.

The electroencephalograph has proved a valuable clinical asset.

EPILEPTIC HOME

This Home has become, in fact, a special facility for the mentally subnormal. There are a number of patients in mental hospitals who could well be cared for in this Home or a similar Institution, but who do not suffer from Epilepsy.

During the last financial year an assistant to the School Teacher was appointed. This will enable the teacher to devote more time to children able to benefit from more formal school training.

There is need to more fully develop and organise the occupations for the older patients. In this group it would be of advantage to have greater numbers, when a sheltered workshop would become a practicable proposition.

ANCILLARY SERVICES

There is a position for a senior clinical psychologist vacant at Toowoomba.

Occupational Therapists are required for Brisbane and Toowoomba Mental Hospitals.

It is hoped that a senior psychiatric social worker will be appointed to the Mental Hygiene Division during 1962. The duties and responsibilities of a psychiatric social worker are rather beyond the experience of a recent graduate in Social Studies. However, the appointment of a Senior Psychiatric Social Worker should enable the new graduate to be given the necessary help and direction. It is expected that this officer will also work in close association with the Division of Social Services.

TABLE LXXXIII

QUEENSLAND MENTAL HOSPITALS

SHOWING ADMISSIONS, RE-ADMISSIONS, DISCHARGES AND DEATHS, DURING THE YEAR ENDED 30TH JUNE, 1962

	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
On the Books of the Hospitals on 1st July, 1961	**1,255**	**927**	**2,182**	**567**	**573**	**1,140**	**343**	**332**	**675**	**211**	**2,376**	**1,832**	**4,208**
Admitted for the first time—certified	292	300	592	27	28	55	15	1	16	49	383	329	712
Admitted for the first time—voluntary	73	73	146	61	64	125	12	11	23	16	162	148	310
Re-admitted—certified	122	191	313	7	9	16	3	..	3	18	150	200	350
Re-admitted—voluntary	59	93	152	21	54	75	..	2	2	6	86	149	235
Total Admissions	546	657	1,203	116	155	271	30	14	44	89	781	826	1,607
Totals on Books and Admissions—All Hospitals	**1,801**	**1,584**	**3,385**	**683**	**728**	**1,411**	**373**	**346**	**719**	**300**	**3,157**	**2,658**	**5,815**
Transferred from Brisbane	..	..	..	46	1	47	..	6	6	..	46	7	53
Transferred from Toowoomba	15	3	18	..	..	..	..	1	1	..	15	4	19
Transferred from Ipswich	6	1	7	..	..	..	..	..	..	..	6	1	7
Transferred from Mosman Hall	2	..	2	..	..	..	..	..	..	..	2	..	2
***Total number under care during the year**	**1,824**	**1,588**	**3,412**	**729**	**729**	**1,458**	**373**	**353**	**726**	**300**	**3,226**	**2,670**	**5,896**
†Discharged—													
Recovered	17	55	72	44	92	136	7	3	10	78	146	150	296
Relieved	246	437	68	13	25	38	4	1	5	6	269	463	732
Not Improved	41	22	63	35	28	63	9	9	18	3	88	59	147
Voluntarily left	82	73	155	50	12	62	1	..	1	7	140	85	225
Total Discharges	386	587	973	142	157	299	21	13	34	94	643	757	1,400
Died	75	80	155	36	23	59	11	12	23	14	136	115	251
Total Number Discharged and Died	**461**	**667**	**1,128**	**178**	**180**	**358**	**32**	**25**	**57**	**108**	**779**	**872**	**1,651**
Transferred to Brisbane	..	..	..	15	3	18	6	1	7	1	22	4	26
Transferred to Toowoomba	46	1	47	..	..	..	..	..	..	..	46	1	47
Transferred to Ipswich	..	6	6	..	1	1	..	..	..	..	..	7	7
Transferred to Mosman Hall	..	..	..	..	..	..	..	..	..	..	..	..	..
Total number discharged, died, &c., during year	507	674	1,181	193	184	377	38	26	64	109	847	884	1,731
Remaining on Books of Hospitals on 30th June, 1962	**1,317**	**914**	**2,231**	**536**	**545**	**1,081**	**335**	**327**	**662**	**191**	**2,379**	**1,786**	**4,165**
Average Number Daily Resident	**1,162**	**802**	**1,964**	**529**	**516**	**1,045**	**330**	**315**	**645**	**193**	**2,214**	**1,633**	**3,847**
Number on leave of absence on 30th June, 1962	194	235	429	19	38	57	11	45	56	21	245	318	563
Proportion of Mentally Sick to each 1,000 of population as at 30th June, 1962											2·85	2·16	2·53
Proportion of Admissions per 10,000 of population for year ended 30th June, 1962											10·06	11·07	10·56
† Includes Section 49 Discharges as shown—													
Recovered	..	..	..	3	13	16	..	..	..	..	3	13	16
Relieved	19	54	73	3	7	10	2	..	2	2	24	61	85
Not Improved	3	1	4	1	..	1	..	..	..	..	4	1	5
	22	55	77	7	20	27	2	..	2	2	31	75	106

* These totals include interhospital transfers.

TABLE LXXXIV

ADMISSIONS, DISCHARGES, AND DEATHS, WITH THE PROPORTIONS OF RECOVERIES AND DEATHS PER CENT. DURING THE YEAR ENDED 30TH JUNE, 1962

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
Total Admissions ..	546	657	1,203	116	155	271	30	14	44	89	781	826	1,607
*Discharged—													
Recovered ..	18	60	78	79	99	178	7	3	10	78	182	162	344
Relieved ..	315	500	815	28	30	58	4	1	5	13	360	531	881
Not Improved ..	53	27	80	35	28	63	10	9	19	3	101	64	165
Died	75	80	155	36	23	59	11	12	23	14	136	115	251
Average Number Daily Resident ..	1,162	802	1,964	529	516	1,045	330	315	645	193	2,214	1,633	3,847
Percentage of Recoveries on Admissions ..	3·30	9·13	6·48	68·10	63·23	65·68	23·33	21·43	22·73	87·64	23·3	19·25	21·41
Percentage of Patients Relieved on Admissions	55·68	76·10	67·75	24·14	19·35	21·40	13·33	7·14	11·36	14·61	46·09	64·29	54·82
Percentage of Deaths on Average Number Resident	6·45	9·98	7·89	6·80	4·45	5·64	3·3	3·81	3·57	7·23	6·14	7·04	6·52

* For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under headings shown.

TABLE LXXXV

FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDED 30TH JUNE, 1962

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
1. AFFECTIVE REACTION TYPES—													
(*a*) Manic Depressive Psychosis	7	19	26	2	..	2	..	..	..	2	11	19	30
(*b*) Mania	..	..	..	3	2	5	..	..	..	1	4	2	6
(*c*) Depression	24	42	66	12	48	60	..	..	..	1	37	90	127
Reactive Depression ..	2	25	27	7	8	15	..	..	..	..	9	33	42
Recurrent Depression ..	1	2	3	..	..	..	..	..	..	..	1	2	3
Hypomania	4	3	7	..	..	..	..	..	..	..	4	3	7
(*d*) Involutional Depression	1	8	9	..	9	9	..	..	..	..	1	17	18
Paranoid Reaction ..	..	..	..	4	..	4	..	..	..	..	4	..	4
Involutional Melancholia ..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. SCHIZOPHRENIC REACTION TYPES—													
(*a*) Schizoid Personality ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Schizophrenia	172	178	350	18	32	50	16	..	16	17	223	210	433
Schizophrenia Paranoid Type	18	35	53	..	..	..	..	..	..	8	26	35	61
Hebephrenia	2	3	5	..	..	..	..	..	..	..	2	3	5
(*b*) Paraphrenia	..	15	15	3	2	5	..	..	..	..	3	17	20
Catatonia	4	2	6	..	..	..	..	..	..	2	6	2	8
(*c*) Paranoid Reaction ..	7	14	21	..	..	..	..	..	..	1	8	14	22
3. ORGANIC REACTION TYPES—													
(*a*) Organic Dementia ..	15	3	18	..	..	..	..	..	..	..	15	3	18
Organic Dementia Trauma	2	..	2	..	..	..	..	..	..	..	2	..	2
Organic Psychosis	..	3	3	..	..	..	..	..	..	..	..	3	3
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..
Huntington's Chorea ..	1	..	1	..	..	..	..	..	..	2	3	..	3
Cerebral Atrophy	1	..	1	..	..	..	..	..	..	..	1	..	1
(*b*) Toxins—													
Acute Toxic Psychosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Acute Alcholism ..	..	1	1	..	..	..	..	..	..	2	2	1	3
Alcoholic Hallucinosis ..	1	2	3	..	..	..	..	..	..	..	1	2	3
Alcoholic Psychosis ..	1	1	2	2	..	2	..	..	..	1	4	1	5
Puerperal Psychosis ..	..	..	..	..	1	1	..	..	..	..	..	1	1
Alcoholic Psychosis (Korsakov's)	..	..	..	..	..	..	..	..	..	4	4	..	4
Cerebral Syphilis ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Alcoholism	31	9	40	19	4	23	..	..	..	8	58	13	71
Acute Confusional Psychosis	6	5	11	..	..	..	..	..	..	..	6	5	11
(*c*) Arteriosclerotic Dementia	..	7	7	4	6	10	..	..	..	2	6	13	19
Arteriosclerotic Psychosis	..	..	..	..	..	..	..	..	..	..	..	..	..
Presenile Dementia ..	8	5	13	..	..	..	..	..	..	..	8	5	13
Cerebral Arteriosclerosis	29	9	38	..	..	..	..	..	..	1	30	9	39
Cerebral Deterioration (Subdural Haematoma)	..	..	..	1	..	1	..	..	..	..	1	..	1
Senile Dementia	45	83	128	7	9	16	..	..	..	4	56	92	148
Senile Psychosis	1	5	6	3	2	5	..	..	..	..	4	7	11
Post Eucephalitic Parkinsonism	..	..	..	..	..	..	..	..	..	..	..	..	..
Senile Depressive	2	4	6	..	..	..	..	..	..	..	2	4	6
4. EPILEPTIC REACTION TYPES—													
Epileptic Psychosis ..	..	2	2	2	1	3	..	..	..	..	2	3	5
Epilepsy	9	14	23	3	2	5	..	..	..	..	12	16	28
Epilepsy with Schizophrenia ..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. PSYCHONEUROTIC REACTION TYPES—													
Psychoneurosis	7	13	20	..	5	5	..	..	..	1	8	18	26
Anxiety State	21	23	44	12	12	24	..	..	..	..	33	35	68
Hysteria	9	12	21	3	2	5	..	..	..	1	13	14	27
Obsessive	..	5	5	..	..	..	..	..	..	..	..	5	5
Hypochondriasis	..	..	..	..	1	1	..	..	..	..	..	1	1
Depression	4	19	23	..	..	..	..	1	1	1	5	20	25
Emotional Instability ..	..	..	..	3	..	3	..	..	..	..	3	..	3
6. MENTAL DEFICIENCY—													
(*a*) Mental Deficiency ..	33	21	54	7	8	15	..	..	..	4	44	29	73
With Epilepsy	6	3	9	..	..	..	2	4	6	1	9	7	16
Moron	..	..	..	..	..	..	3	1	4	..	3	1	4
Mongol	5	..	5	..	..	..	2	1	3	..	7	1	8
With Schizophrenia ..	6	5	11	..	..	..	..	..	..	1	7	5	12
(*b*) Idiocy	..	..	..	..	..	..	4	2	6	..	4	2	6
(*c*) Postencephalitic Idiocy ..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*d*) Microcephalic Idiocy ..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*e*) Imbecility	..	1	1	..	..	..	1	6	7	..	1	7	8
Postmeningitic	1	..	1	..	..	..	..	..	..	..	1	..	1
Schilders Disease	..	..	..	..	..	..	..	..	..	..	..	..	..
7. ADDICTION—													
Chronic Alcoholism ..	23	25	48	..	..	..	1	..	1	24	48	25	73
Drug	13	11	24	..	..	..	..	..	..	..	13	11	24
8. PSYCHOPATHIC PERSONALITY	19	18	37	1	1	2	..	..	..	..	20	19	39
9. TRAUMATIC PSYCHOSIS ..	5	1	6	..	..	..	..	..	..	..	5	1	6
UNDIAGNOSED	..	1	1	..	..	..	..	..	..	..	..	1	1
Totals	546	657	1,203	116	155	271	29	15	44	89	780	827	1,607

TABLE LXXXVI

CAUSES OF DEATHS WHICH OCCURRED DURING PERIOD ENDED 30TH JUNE, 1962

	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
GENERAL DISEASES—													
Septicaemia	..	1	1	..	..	..	1	..	1	..	1	1	2
Senility	..	4	4	..	..	..	..	..	..	..	..	4	4
Hodgkin's Disease	1	..	1	..	..	..	..	..	..	..	1	..	1
Multiple Myelomatosis	..	..	..	..	..	..	..	1	1	..	..	1	1
Squamous Cell Carcinoma	..	..	..	..	..	..	1	1	2	..	1	1	2
											3	7	10
Accident and Suicide	2	1	3	2	..	2	..	..	..	..	4	1	5
DISEASES OF THE NERVOUS SYSTEM—													
Cerebral Degeneration	1	1	2	2	..	2	1	..	1	..	4	1	5
Cerebral Thrombosis	2	3	5	..	1	1	2	1	3	..	4	5	9
Cerebral Haemorrhage	..	4	4	..	..	..	..	..	..	..	..	4	4
Cerebral Arteriosclerosis	2	2	4	..	..	..	..	..	..	..	2	2	4
Epilepsy	4	..	4	..	..	..	..	..	..	..	4	..	4
Hydrocephalus	1	..	1	..	..	..	..	1	1	..	1	1	2
Status Epilepteus	..	..	..	1	..	1	..	..	..	..	1	..	1
											16	13	29
DISEASE OF THE CIRCULATORY SYSTEM—													
Cardio Vascular Degeneration	17	13	30	8	4	12	1	2	3	..	26	19	45
Coronary Occlusion	1	4	5	2	1	3	1	..	1	1	5	5	10
Acute Myocarditis	..	1	1	..	..	..	..	..	..	..	..	1	1
Myocardial Degeneration	2	7	9	1	7	8	..	..	..	2	5	14	19
Coronary Thrombosis	2	..	2	2	4	6	1	..	1	..	5	4	9
Stokes Adam's Attack	..	1	1	..	..	..	..	..	..	..	..	1	1
Aortic Incompetence	..	1	1	..	..	..	..	..	..	..	..	1	1
Myocardial Infarction	1	2	3	..	..	..	..	..	..	..	1	2	3
Auricular Fibrillation	..	2	2	..	..	..	..	..	..	..	..	2	2
Chronic Myocarditis	..	..	..	..	..	..	..	..	..	..	..	..	..
Congestive Cardiac Failure	7	2	9	3	1	4	..	..	..	..	10	3	13
Left Ventricular Failure	1	..	1	1	1	2	1	..	1	..	3	1	4
Cardiac Failure	4	3	7	..	..	..	..	..	..	..	4	3	7
Ruptured Abdominal Aortic Anuirysm	1	..	1	..	..	..	..	..	..	..	1	..	1
Aortic Stenosis	..	1	1	..	..	..	..	..	..	..	..	1	1
											60	57	117
DISEASES OF THE RESPIRATORY SYSTEM—													
Broncho Pneumonia	6	7	13	11	1	12	2	1	3	5	24	9	33
Lobar Pneumonia	2	3	5	..	..	..	..	..	..	..	2	3	5
Pulmonary Thrombosis	1	1	2	..	..	..	..	..	..	1	2	1	3
Hypostatic Pneumonia	1	6	7	..	..	..	..	..	..	1	2	6	8
Pneumonia	6	1	7	..	2	2	..	1	1	2	8	4	12
Basal Pneumonia	..	5	5	..	..	..	..	..	..	..	..	5	5
Pulmonary Tuberculosis	3	..	3	..	..	..	..	..	..	..	3	..	3
Staphylococcal Pneumonia	..	1	1	..	..	..	..	..	..	..	..	1	1
											41	29	70
DISEASES OF THE AILMENTARY SYSTEM—													
Carcinoma of Pancreas	..	1	1	..	..	..	..	1	1	..	..	2	2
Rupture of Stomach	..	..	..	..	..	..	..	1	1	..	..	1	1
Volvulus of Stomach	..	..	..	..	..	..	..	1	1	..	..	1	1
Gastroenteritis	..	..	..	..	..	..	..	..	..	2	2	..	2
Carcinoma of Colon	2	..	2	..	..	..	..	..	..	..	2	..	2
Carcinoma of Stomach	..	..	..	1	1	2	..	..	..	..	1	1	2
Peptic Ulcer	1	..	1	1	..	1	..	..	..	..	2	..	2
Carcinoma of Palate	..	1	1	..	..	..	..	..	..	..	..	1	1
Intestinal Obstruction	..	..	..	1	..	1	..	..	..	..	1	..	1
											8	6	14
DISEASES OF THE GENITO-URINARY SYSTEM—													
Carcinoma of Prostate	1	..	1	..	..	..	..	..	..	..	1	..	1
Acute Pylo Nephritis	1	..	1	..	..	..	..	..	..	..	1	..	1
Uraemia	2	1	3	..	..	..	..	1	1	..	2	2	4
											4	2	6
Totals	75	80	155	36	23	59	11	12	23	14	136	115	251

TABLE LXXXVII

BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED DURING THE YEAR ENDED 30TH JUNE, 1962

	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
In apparently good health and condition	234	259	493	74	79	153	28	9	37	60	396	347	743
In indifferent health and reduced condition	224	334	558	33	68	101	1	4	5	27	285	406	691
In bad health and exhausted condition	88	64	152	9	8	17	1	1	2	2	100	73	173
Totals	546	657	1,203	116	155	271	30	14	44	89	781	826	1,607

TABLE LXXXVIII

BIRTH PLACES OF PATIENTS ADMITTED DURING PERIOD ENDED 30TH JUNE, 1962

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
Queensland	320	408	728	76	118	194	23	13	36	41	460	539	999
Other Australian States—													
New South Wales	65	81	146	19	18	37	2	..	2	9	95	99	194
Victoria	8	20	28	2	5	7	..	..	..	3	13	25	38
South Australia	3	6	9	2	..	2	..	..	..	1	6	6	12
Western Australia	1	3	4	1	..	1	..	..	..	1	3	3	6
Tasmania	6	4	10	1	..	1	..	..	..	1	8	4	12
Northern Territory	..	1	1	..	..	..	..	..	..	..	..	1	1
Total Australia	403	523	926	101	141	242	25	13	38	56	585	677	1,262
New Zealand	1	4	5	..	..	..	..	..	..	..	1	4	5
Pacific Islands and New Guinea	2	..	2	..	..	..	..	..	..	..	2	..	2
Great Britain and Ireland	44	64	108	3	9	12	1	..	1	6	54	73	127
Europe (other)	60	52	112	6	1	7	2	..	2	22	90	53	143
Asia—													
China	..	5	5	..	..	..	..	..	..	..	..	5	5
India, Pakistan, Ceylon	6	..	6	..	..	..	..	..	..	1	7	..	7
Other	..	1	1	..	1	1	..	..	..	..	..	2	2
North America	..	..	..	..	..	..	1	..	1	1	2	..	2
South America	..	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	1	1	..	..	..	..	..	..	..	..	1	1
Unknown	30	7	37	6	3	9	1	1	2	3	40	11	51
Totals	546	657	1,203	116	155	271	30	14	44	89	781	826	1,607

TABLE LXXXIX

DISTRICTS WHENCE PATIENTS WERE RECEIVED DURING THE YEAR ENDED 30TH JUNE, 1962

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
Northern and North-Western	6	20	26	..	..	..	1	4	5	89	96	24	120
Central	50	22	72	..	..	..	2	1	3	..	52	23	75
Southern and South-Western	490	615	1,105	116	155	271	27	9	36	..	633	779	1,412
Totals	546	657	1,203	116	155	271	30	14	44	89	781	826	1,607

TABLE XC

GENERAL CLASSIFICATION OF OCCUPATIONS OF PATIENTS ADMITTED DURING THE YEAR ENDED 30TH JUNE, 1962

Occupations	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Females	Totals	Males	Females	Totals	Males	Females	Totals	Males	Males	Females	Totals
Rural Industries	26	1	27	28	1	29	1	..	1	16	71	2	73
Secondary Industries, Trades, &c.—													
Building Construction	22	..	22	10	..	10	1	..	1	..	33	..	33
Machinery and Electrical	27	2	29	6	..	6	..	..	..	12	45	2	47
Foodstuffs, Meat, &c.	17	8	25	2	..	2	1	..	1	4	24	8	32
Clothing, Retail, &c.	6	8	14	..	..	..	..	..	..	3	9	8	17
Mining	2	..	2	..	..	..	..	..	..	2	4	..	4
Transport	11	..	11	2	..	2	..	..	..	..	13	..	13
Clerical	23	22	45	7	2	9	2	..	2	3	35	24	59
Domestic Employment	..	387	387	..	117	117	..	1	1	..	..	505	505
Private Employment	..	..	..	2	..	2	..	..	..	4	6	..	6
Miscellaneous Employment	195	30	225	32	9	41	10	..	10	23	260	39	299
No Occupation, and Pensioners	189	184	373	23	19	42	2	..	2	16	230	203	433
Professions	4	10	14	..	4	4	..	..	..	2	6	14	20
Children	24	5	29	4	3	7	12	12	24	..	40	20	60
Unknown	..	..	..	..	..	..	1	1	2	4	5	1	6
Totals	546	657	1,203	116	155	271	30	14	44	89	781	826	1,607

TABLE XCI

Brisbane Mental Hospital

Age Groups of Patients Whose Admissions, Discharges or Deaths Occurred During the Year and Those Who Remained on Books of Hospital on 30th June, 1962

Age Group	Admissions			Discharges						Deaths			Remaining		
				Recovered			Relieved and Not Improved								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 1 year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1 year and under 2 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2 years and under 3 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 years and under 4 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4 years and under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 years and under 6 years	1	..	1	..	..	..	1	..	1	..	..	..	1	..	1
6 years and under 7 years	..	..	..	..	..	..	1	..	1	..	..	..	5	6	11
7 years and under 8 years	1	..	1	..	..	..	1	1	2	..	..	..	9	8	17
8 years and under 9 years	..	..	..	..	..	..	..	..	..	..	..	..	5	5	10
9 years and under 10 years	1	..	1	..	..	..	1	..	1	..	..	..	9	5	14
10 years and under 11 years	3	..	3	..	..	..	2	..	2	..	..	..	10	6	16
11 years and under 12 years	1	1	2	..	..	..	1	..	1	..	..	..	11	5	16
12 years and under 13 years	2	..	2	..	..	..	3	..	3	..	..	..	12	10	22
13 years and under 14 years	6	..	6	..	..	..	3	..	3	..	..	..	12	5	17
14 years and under 15 years	3	3	6	..	2	2	..	..	..	..	..	..	12	6	18
15 years and under 16 years	6	9	15	1	1	2	..	2	2	..	..	..	11	12	23
16 years and under 17 years	4	7	11	..	2	2	2	4	6	..	..	..	12	11	23
17 years and under 18 years	3	3	6	..	..	..	4	6	10	..	..	..	11	10	21
18 years and under 19 years	12	3	15	..	..	..	6	3	9	..	..	..	11	8	19
19 years and under 20 years	4	3	7	1	..	1	4	1	5	..	..	..	14	3	17
20 years and under 30 years	71	53	124	..	6	6	61	46	107	2	2	4	138	67	205
30 years and under 40 years	144	113	257	5	11	16	110	102	212	6	1	7	256	163	419
40 years and under 50 years	94	169	263	5	14	19	79	140	219	4	3	7	280	221	501
50 years and under 55 years	34	62	96	3	11	14	24	41	65	6	11	17	111	98	209
55 years and under 56 years		10			3			3			1			14	
56 years and under 57 years		9			..			5			..			19	
57 years and under 58 years	43	4	82	1	1	8	17	6	46	8	..	14	154	16	256
58 years and under 59 years		9			1			7			3			26	
59 years and under 60 years		7			2			8			2			27	
60 years and under 61 years	6	8	14	1	2	3	3	10	13	..	..	..	17	9	26
61 years and under 62 years	3	9	12	..	1	1	5	8	13	1	3	4	22	11	33
62 years and under 63 years	7	9	16	..	1	1	3	9	12	4	..	4	29	5	34
63 years and under 64 years	8	8	16	..	1	1	2	4	6	1	1	2	20	15	35
64 years and under 65 years	..	11	11	..	..	..	1	6	7	2	1	3	20	7	27
65 years and under 66 years	3	11	14	..	..	..	4	13	17	1	..	1	17	7	24
66 years and under 67 years	4	10	14	..	..	..	1	3	4	3	1	4	13	13	26
67 years and under 68 years	2	6	8	..	..	..	3	6	9	4	3	7	12	11	23
68 years and under 69 years	6	9	15	1	..	1	2	9	11	1	3	4	7	5	12
69 years and under 70 years	7	5	12	..	..	..	3	4	7	3	..	3	13	7	20
70 years and under 71 years	4	9	13	..	..	..	1	6	7	1	3	4	7	6	13
71 years and under 72 years	3	6	9	..	..	..	1	5	6	2	4	6	3	9	12
72 years and under 73 years	7	3	10	..	..	..	3	7	10	1	..	1	6	4	10
73 years and under 74 years	2	4	6	..	..	..	1	4	5	2	4	6	8	5	13
74 years and under 75 years	9	11	20	..	1	1	3	9	12	2	3	5	7	4	11
75 years and under 76 years	3	5	8	..	..	..	1	4	5	..	..	..	3	4	7
76 years and under 77 years	9	12	21	..	..	..	1	7	8	7	..	7	3	7	10
77 years and under 78 years	3	5	8	..	..	..	1	3	4	3	2	5	1	4	5
78 years and under 79 years	4	9	13	..	..	..	1	4	5	3	5	8	4	5	9
79 years and under 80 years	1	6	7	..	..	..	..	5	5	..	2	2	2	5	7
80 years and under 81 years	3	7	10	..	..	..	1	5	6	3	3	6	3	4	7
81 years and under 82 years	5	7	12	..	..	..	3	3	6	..	3	3	3	2	5
82 years and under 83 years	1	2	3	..	..	..	1	..	1	2	3	5	3	3	6
83 years and under 84 years	3	2	5	..	..	..	1	3	4	1	..	1	2	4	6
84 years and under 85 years	2	2	4	..	..	..	..	1	1	..	2	2	1	1	2
85 years and under 86 years	2	..	2	..	..	..	..	2	2	1	2	3	2	..	2
86 years and under 87 years	1	4	5	..	..	..	..	2	2	..	2	2	2	3	5
87 years and under 88 years	2	1	3	..	..	..	1	4	5	1	2	3	1	..	1
88 years and under 89 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
89 years and under 90 years	..	4	4	..	..	..	1	2	3	..	2	2	..	1	1
90 years and under 91 years	..	2	2	..	..	..	..	1	1	..	1	1	..	..	..
91 years and under 92 years	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..
92 years and under 93 years	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..
93 years and under 94 years	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
94 years and under 95 years	..	1	1	..	..	..	..	..	..	..	1	1	..	..	..
95 years and under 96 years	1	..	1	..	..	..	..	..	..	..	..	..	1	1	2
Unknown	2	2	4	..	..	..	..	1	1	..	..	..	1	1	2
Totals	546	657	1,203	18	60	78	368	527	895	75	80	155	1,317	914	2,231

Toowoomba Mental Hospital

Under 3 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 years and under 4 years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
4 years and under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5 years and under 6 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6 years and under 7 years	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1
7 years and under 8 years	..	..	..	..	..	..	1	..	1	..	..	..	..	1	1
8 years and under 9 years	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
9 years and under 10 years	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4
10 years and under 11 years	1	..	1	..	..	..	..	..	..	..	..	..	..	1	1
11 years and under 12 years	..	..	..	..	..	..	1	..	1	..	..	..	..	2	2
12 years and under 13 years	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4
13 years and under 14 years	2	1	3	..	..	..	..	..	..	..	..	..	3	4	7
14 years and under 15 years	..	1	1	..	..	..	..	2	2	..	..	..	3	4	7
15 years and under 16 years	..	..	..	..	1	1	..	..	..	..	..	..	2	..	2
16 years and under 17 years	1	..	1	2	..	2	1	..	1	..	..	..	1	3	4
17 years and under 18 years	..	2	2	..	..	..	..	..	..	..	..	..	6	5	11
18 years and under 19 years	2	..	2	..	..	..	1	1	2	..	..	..	9	2	11
19 years and under 20 years	2	3	5	1	..	1	3	2	5	..	..	..	2	2	4
20 years and under 30 years	18	21	39	11	15	26	6	5	11	2	1	3	33	44	77
30 years and under 40 years	27	37	64	25	19	44	7	11	18	1	..	1	69	72	141
40 years and under 50 years	19	27	46	13	27	40	4	2	6	2	2	4	116	95	211
50 years and under 55 years	13	14	27	9	9	18	1	4	5	5	2	7	71	73	144
55 years and under 56 years		1			1			..			1			20	
56 years and under 57 years		4			2			1			..			15	
57 years and under 58 years	7	1	20	8	2	15	2	..	4	2	..	3	77	13	160
58 years and under 59 years		3			..			1			..			18	
59 years and under 60 years		4			2			..			..			17	
60 years and under 61 years	1	..	1	1	..	1	2	4	6	..	..	..	15	13	28
61 years and under 62 years	2	4	6	1	2	3	..	3	3	..	..	..	15	21	36
62 years and under 63 years	..	3	3	1	2	3	1	2	3	1	2	3	9	7	16
63 years and under 64 years	2	..	2	1	..	1	..	2	2	1	..	1	7	10	17
64 years and under 65 years	..	3	3	..	3	3	1	1	2	3	1	4	7	8	15

TABLE XCI—*continued*

TOOWOOMBA MENTAL HOSPITAL—*continued*

Age Group	Admissions			Discharges						Deaths			Remaining		
				Recovered			Relieved and Not Improved								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
65 years and under 66 years	2	5	7	1	1	2	3	3	6	1	..	1	12	9	21
66 years and under 67 years	1	3	4	..	3	3	1	1	2	1	3	4	6	9	15
67 years and under 68 years	..	2	2	..	..	..	..	4	4	..	..	..	10	8	18
68 years and under 69 years	1	1	2	..	..	..	2	..	2	1	1	2	14	8	22
69 years and under 70 years	..	2	2	..	2	2	2	..	2	2	..	2	4	4	8
70 years and under 71 years	..	2	2	..	2	2	2	3	5	2	..	2	5	6	11
71 years and under 72 years	1	1	2	1	1	2	..	1	1	2	1	3	3	2	5
72 years and under 73 years	2	..	2	2	..	2	1	2	3	..	..	..	3	6	9
73 years and under 74 years	2	1	3	1	1	2	6	..	6	1	..	1	2	2	4
74 years and under 75 years	2	2	4	..	2	2	1	..	1	2	1	3	4	7	11
75 years and under 76 years	1	1	2	..	..	..	3	..	3	..	1	1	3	5	8
76 years and under 77 years	2	2	4	..	1	1	3	1	4	2	..	2	2	6	8
77 years and under 78 years	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4
78 years and under 79 years	1	..	1	1	..	1	1	..	1	2	2	4	3	1	4
79 years and under 80 years	1	..	1	..	..	..	2	..	2	..	..	..	2	3	5
80 years and under 81 years	..	..	..	..	..	..	..	..	..	..	1	1	1	2	3
81 years and under 82 years	..	1	1	..	1	1	..	..	..	3	1	4	2	2	4
82 years and under 83 years	..	..	..	..	..	..	1	..	1	..	1	1	..	1	1
83 years and under 84 years	1	1	2	..	..	..	1	1	2	..	..	..	1	2	3
84 years and under 85 years	1	1	2	..	..	..	1	..	1	..	1	1	1	..	1
85 years and under 86 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
86 years and under 87 years	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1
87 years and under 88 years	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1
88 years and under 89 years	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
89 years and under 90 years	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..
90 years and under 91 years	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..
91 years and under 92 years	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..
92 years	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3
Totals, Toowoomba Mental Hospital	116	155	271	79	99	178	63	58	121	36	23	59	536	545	1,081

IPSWICH MENTAL HOSPITAL

Under 1 year	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1 year and under 2 years	1	1	..	..	..	..	..	..	..	..	..	..	1	1	2
2 years and under 3 years	..	1	1	..	..	..	..	..	..	..	..	..	3	..	3
3 years and under 4 years	1	1	2	..	..	..	..	..	..	..	1	1	6	3	9
4 years and under 5 years	1	2	3	..	..	..	..	..	..	..	..	..	7	4	11
5 years and under 6 years	3	1	4	..	..	..	1	..	1	..	..	..	8	4	12
6 years and under 7 years	1	1	2	..	..	..	..	..	..	1	1	2	6	4	10
7 years and under 8 years	1	..	1	..	..	..	..	..	..	..	..	..	6	4	10
8 years and under 9 years	..	..	..	..	..	..	..	..	..	..	..	..	3	4	7
9 years and under 10 years	1	1	2	..	..	..	..	..	..	1	..	1	10	3	13
10 years and under 11 years	3	1	4	..	..	..	1	..	1	..	..	..	3	4	7
11 years and under 12 years	..	..	..	..	..	..	..	..	..	..	..	..	..	5	5
12 years and under 13 years	..	2	2	..	..	..	..	..	..	..	1	1	6	8	14
13 years and under 14 years	..	..	..	..	..	..	..	..	..	..	..	..	8	4	12
14 years and under 15 years	..	1	1	..	..	..	..	..	..	..	..	..	8	2	10
15 years and under 16 years	1	..	1	..	..	..	..	..	..	..	..	..	1	6	7
16 years and under 17 years	..	..	..	..	..	..	..	..	..	..	..	..	7	3	10
17 years and under 18 years	..	..	..	..	..	..	..	..	..	..	..	..	2	4	6
18 years and under 19 years	..	..	..	..	..	..	..	..	..	..	..	..	5	4	9
19 years and under 20 years	..	..	..	..	..	..	1	..	1	1	..	1	30	20	50
20 years and under 25 years	2	..	2	2	..	2	1	..	1	..	1	1	16	22	38
25 years and under 30 years	3	..	3	2	..	2	..	..	..	..	..	..	14	15	29
30 years and under 35 years	6	..	6	1	..	1	1	..	1	..	..	..	15	17	32
35 years and under 40 years	3	..	3	..	..	..	1	..	1	1	..	1	21	24	45
40 years and under 45 years	3	..	3	1	..	1	..	..	..	..	2	2	12	26	38
45 years and under 50 years	..	1	1	..	..	..	..	..	..	..	1	1	28	18	46
50 years and under 55 years	..	..	..	..	..	..	..	..	..	..				3	
55 years and under 56 years														6	
56 years and under 57 years														3	
57 years and under 58 years														4	53
58 years and under 59 years	1	..	1	..	..	..	1	..	1	..	..	..	29	3	
59 years and under 60 years														5	
60 years and under 61 years															
61 years and under 62 years	..	..	..	..	..	..	..	1	1	..	..	..	8	8	16
62 years and under 63 years	..	..	..	..	..	..	..	..	..	..	..	..	5	7	12
63 years and 64 years	..	..	..	1	..	1	..	..	..	1	..	1	4	5	9
64 years and under 65 years	..	..	..	..	..	..	..	..	..	1	..	1	5	8	13
65 years and under 66 years	..	..	..	..	..	..	1	..	1	..	..	..	5	3	8
66 years and under 67 years	..	..	..	..	..	..	..	..	..	..	..	..	5	5	10
67 years and under 68 years	..	..	..	..	..	..	..	1	1	1	..	1	9	3	12
68 years and under 69 years	..	..	..	..	..	..	..	..	..	..	..	..	4	4	8
69 years and under 70 years	..	..	..	..	2	2	..	2	2	..	..	..	7	8	15
70 years and under 71 years	..	1	1	..	..	..	1	3	4	1	..	1	3	7	10
71 years and under 72 years	..	..	..	..	1	1	..	1	1	..	..	..	3	5	8
72 years and under 73 years	..	..	..	..	..	..	..	..	..	..	1	1	3	4	7
73 years and under 74 years	..	..	..	..	..	..	1	..	1	1	1	2	2	1	3
74 years and under 75 years	..	..	..	..	..	..	..	1	1	1	1	2	2	2	4
75 years and under 76 years	..	..	..	..	..	..	..	..	..	..	..	..	3	6	9
76 years and under 77 years	..	..	..	..	..	..	1	..	1	..	..	..	2	3	5
77 years and under 78 years	..	..	..	..	..	..	..	..	..	..	1	1	3	3	6
78 years and under 79 years	..	..	..	..	..	..	1	..	1	1	1	2	1	2	3
79 years and under 80 years	..	..	..	..	..	..	1	..	1	..	..	..	3	3	6
80 years and under 81 years	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3
81 years and under 82 years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
82 years and under 83 years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
83 years and under 84 years	..	..	..	..	..	..	..	1	1	..	..	..	1	..	1
84 years and under 85 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
85 years and under 86 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
86 years and under 87 years	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1
87 years and under 88 years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
88 years and under 89 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
89 years and under 90 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
90 years and under 91 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
91 years and under 92 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
92 years and under 93 years	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
93 years and under 94 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	30	14	44	7	3	10	14	10	24	11	12	23	335	327	662

TABLE XCI—*continued*

MOSMAN HALL, CHARTERS TOWERS

Age Group	Admissions	Discharges		Deaths	Remaining
		Recovered	Relieved and Not Improved		
0–15 years	..	..	..	..	1
16 years	1	..	1	..	2
17 years	1	..	..	..	1
18 years	..	1	..	..	2
19 years	1	1	..	..	2
20 years	..	..	..	..	1
20 and under 30 years	13	14	3	1	15
30 and under 40 years	26	29	4	2	39
40 and under 50 years	19	19	7	1	48
50 and under 60 years	17	9	..	1	44
60 years	1	1	..	..	4
61 years	1	1	..	..	3
62 years	..	..	..	..	6
63 years	1	2	..	1	1
64 years	..	1	..	..	2
65 years	..	..	..	..	2
66 years	1	..	..	..	1
67 years	1	..	..	1	1
68 years	..	..	..	..	1
69 years	..	..	1	..	..
70 years	..	..	..	1	2
71 years	1	..	..	..	2
72 years	..	..	..	..	2
73 years	1	..	..	..	1
74 years	..	..	..	1	3
75 years	..	..	1	1	1
76 years	..	..	..	..	..
77 years	..	..	..	..	..
78 years	1	..	..	..	..
79 years	1	..	..	2	1
80 years	2	..	..	..	..
81 years	..	..	..	..	1
82 years	..	..	..	..	2
83 years	..	..	..	1	..
92 years	..	..	..	1	..
	89	78	17	14	191

TABLE XCII

MARITAL STATUS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES AND DEATHS OCCURRED DURING THE YEAR AND OF PATIENTS WHO REMAINED IN HOSPITAL ON 30TH JUNE, 1962

Marital Status	Admissions			*Discharges						Deaths			Remaining		
				Recovered			Relieved and not Improved								
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
BRISBANE MENTAL HOSPITAL															
Single	298	189	487	7	20	27	221	158	379	37	15	52	1,016	479	1,495
Married	199	331	530	11	30	41	118	269	387	27	27	54	246	328	574
Widowed	34	128	162	..	10	10	13	94	107	11	36	47	30	91	121
Divorced	13	9	22	..	..	..	12	6	18	..	2	2	17	12	29
Unknown	2	..	2	..	..	..	4	..	4	..	..	..	8	4	12
Totals, Brisbane Mental Hospital	**546**	**657**	**1,203**	**18**	**60**	**78**	**368**	**527**	**895**	**75**	**80**	**155**	**1,317**	**914**	**2,231**
TOOWOOMBA MENTAL HOSPITAL															
Single	55	35	90	39	15	54	43	21	64	21	9	30	461	323	784
Married	46	102	148	35	75	110	12	30	42	8	9	17	50	170	220
Widowed	12	16	28	4	8	12	7	6	13	4	3	7	14	28	42
Divorced	3	2	5	1	1	2	..	1	1	2	1	3	2	19	21
Unknown	..	..	..	..	..	..	1	..	1	1	1	2	9	5	14
Totals, Toowoomba Mental Hospital	**116**	**155**	**271**	**79**	**99**	**178**	**63**	**58**	**121**	**36**	**23**	**59**	**536**	**545**	**1,081**
IPSWICH MENTAL HOSPITAL															
Single	25	13	38	6	1	7	11	2	13	9	4	13	289	226	515
Married	4	..	4	..	1	1	3	5	8	1	3	4	29	64	93
Widowed	1	1	2	1	1	2	..	3	3	1	4	5	6	28	34
Divorced	..	..	..	..	..	..	..	..	..	..	1	1	3	8	11
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	8	1	9
Totals, Ipswich Mental Hospital	**30**	**14**	**44**	**7**	**3**	**10**	**14**	**10**	**24**	**11**	**12**	**23**	**335**	**327**	**662**
MOSMAN HALL															
Single	64	..	64	60	..	60	8	..	8	7	..	7	156	..	156
Married	19	..	19	14	..	14	8	..	8	4	..	4	20	..	20
Widowed	5	..	5	3	..	3	..	..	..	3	..	3	6	..	6
Divorced	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Unknown	1	..	1	1	..	1	..	..	..	..	..	..	8	..	8
Totals, Mosman Hall, Charters Towers	**89**	**..**	**89**	**78**	**..**	**78**	**16**	**..**	**16**	**14**	**..**	**14**	**191**	**..**	**191**
Grand Totals, all Hospitals ..	**781**	**826**	**1,607**	**182**	**162**	**344**	**361**	**595**	**1,056**	**136**	**115**	**251**	**2,379**	**1,786**	**4,165**

* For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under headings shown.

TABLE XCIII

LENGTH OF RESIDENCE IN THE HOSPITAL OF THE PATIENTS WHO WERE DISCHARGED OR WHO DIED DURING THE YEAR AND OF THOSE WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1962

—	*Discharges						Deaths			Remaining		
	Recovered			Relieved and not Improved								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
BRISBANE MENTAL HOSPITAL												
Under 1 month	4	8	12	83	69	152	17	19	36	28	50	78
1 month and under 3 months	5	29	34	137	181	318	12	15	27	85	71	156
3 months and under 6 months	5	14	19	60	105	165	6	9	15	78	96	174
6 months and under 9 months	..	2	2	16	38	54	4	8	12	65	61	126
9 months and under 12 months	1	3	4	11	26	37	5	4	9	55	38	93
1 year and under 2 years	..	1	1	26	38	64	2	10	12	124	166	290
2 years and under 3 years	1	1	2	8	18	26	7	7	14	93	49	142
3 years and under 5 years	..	1	1	8	22	30	2	1	3	138	59	197
5 years and under 7 years	..	..	..	7	7	14	2	1	3	112	47	159
7 years and under 10 years	1	1	2	4	3	7	2	1	3	132	45	177
10 years and under 12 years	..	..	..	..	1	1	4	..	4	71	33	104
12 years and under 15 years	..	..	..	..	5	5	3	1	4	80	56	136
15 years and under 20 years	..	..	..	1	6	7	5	3	8	98	59	157
20 years and over	1	..	1	7	8	15	4	1	5	158	84	242
Totals, Brisbane Mental Hospital	**18**	**60**	**78**	**368**	**527**	**895**	**75**	**80**	**155**	**1,317**	**914**	**2,231**
TOOWOOMBA MENTAL HOSPITAL												
Under 1 month	26	16	42	16	5	21	5	2	7	8	18	26
1 month and under 3 months	27	41	68	4	9	13	4	1	5	8	12	20
3 months and under 6 months	11	22	33	6	4	10	1	..	1	6	12	18
6 months and under 9 months	1	9	10	1	5	6	2	3	5	8	12	20
9 months and under 12 months	3	1	4	3	3	6	1	..	1	6	7	13
1 year and under 2 years	3	5	8	6	4	10	..	..	..	17	25	42
2 years and under 3 years	2	..	2	1	5	6	1	3	4	22	19	41
3 years and under 5 years	2	1	3	..	..	..	3	..	3	34	45	79
5 years and under 7 years	2	1	3	..	1	1	1	..	1	26	31	57
7 years and under 10 years	1	1	2	3	1	4	2	2	4	47	35	82
10 years and under 12 years	1	..	1	2	2	4	1	..	1	27	27	54
12 years and under 15 years	..	1	1	6	2	8	2	4	6	39	34	73
15 years and under 20 years	..	1	1	..	4	4	1	..	1	63	57	120
20 years and over	..	..	..	15	13	28	12	8	20	225	211	436
Totals, Toowoomba Mental Hospital	**79**	**99**	**178**	**63**	**58**	**121**	**36**	**23**	**59**	**536**	**545**	**1,081**
IPSWICH MENTAL HOSPITAL												
Under 1 month	..	1	1	2	1	3	..	..	..	2	9	11
1 month and under 3 months	..	..	..	..	..	..	..	1	1	3	..	3
3 months and under 6 months	1	..	1	1	..	1	..	..	..	11	2	13
6 months and under 9 months	2	..	2	1	..	1	..	..	..	4	3	7
9 months and under 12 months	2	..	2	2	2	4	..	4	4	4	5	9
1 year and under 2 years	1	2	3	1	4	5	1	3	4	18	145	163
2 years and under 3 years	1	..	1	..	..	..	..	1	1	22	6	28
3 years and under 5 years	..	..	..	..	..	..	1	1	2	26	17	43
5 years and under 7 years	..	..	..	..	..	..	..	..	..	22	12	34
7 years and under 10 years	..	..	..	1	1	2	1	..	1	46	21	67
10 years and under 12 years	..	..	..	..	..	..	1	1	2	19	13	32
12 years and under 15 years	..	..	..	1	..	1	..	..	..	15	15	30
15 years and under 20 years	..	..	..	2	..	2	3	..	3	53	39	92
20 years and over	..	..	..	3	2	5	4	1	5	90	40	130
Totals, Ipswich Mental Hospital	**7**	**3**	**10**	**14**	**10**	**24**	**11**	**12**	**23**	**335**	**327**	**662**
MOSMAN HALL												
Under 1 month	2	..	2	2	..	2	1	..	1	4	..	4
1 month and under 3 months	28	..	28	6	..	6	3	..	3	6	..	6
3 months and under 6 months	26	..	26	4	..	4	1	..	1	8	..	8
6 months and under 9 months	12	..	12	..	..	..	..	..	..	10	..	10
9 months and under 12 months	2	..	2	1	..	1	2	..	2	8	..	8
1 year and under 2 years	3	..	3	..	..	..	2	..	2	19	..	19
2 years and under 3 years	1	..	1	1	..	1	1	..	1	19	..	19
3 years and under 5 years	3	..	3	2	..	2	2	..	2	33	..	33
5 years and under 7 years	1	..	1	..	..	..	2	..	2	30	..	30
7 years and under 10 years	..	..	..	..	..	..	..	..	..	18	.	18
10 years and under 12 years	..	..	..	..	..	..	..	..	..	8	..	8
12 years and under 15 years	..	..	..	..	..	..	..	..	..	8	..	8
15 years and under 20 years	..	..	..	..	..	..	..	..	..	8	..	8
20 years and over	..	..	..	..	..	..	..	..	..	12	..	12
Totals, Mosman Hall, Charters Towers	**78**	**..**	**78**	**16**	**..**	**16**	**14**	**..**	**14**	**191**	**..**	**191**
Grand Totals, all Hospitals	**182**	**162**	**344**	**461**	**595**	**1,056**	**136**	**115**	**251**	**2,379**	**1,786**	**4,165**

* For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under headings shown.

TABLE XCIV

SHOWING ADMISSIONS, DISCHARGES, AND DEATHS AT THE WACOL REPATRIATION PAVILION DURING THE YEAR ENDED 30TH JUNE, 1962

Total number of patients on books as at 30th June, 1961	109	Total number of patients on books as at 30th June, 1962	113
Transferred from Brisbane Mental Hospital	35	Total number of patients on leave as at 30th June, 1962	14
Transferred from Toowoomba Mental Hospital	1		
Admitted	4		
	149	Total number of patients in residence as at 30th June, 1962	99
Discharged, relieved	14		
Voluntarily left	3	Average number of patients daily resident	98
Died	2		
Died on leave	1		
Transferred to Brisbane Mental Hospital	14		
Transferred to Toowoomba Mental Hospital	..		
Discharged (Section 50 (8), 49 (3)), Mental Hygiene Act	2		
	36		

TABLE XCV

EXPENDITURE TABLE FOR THE FINANCIAL YEAR ENDED 30TH JUNE, 1962

—	Brisbane Mental Hospital	Toowoomba Mental Hospital	Ipswich Mental Hospital	Mosman Hall, Charters Towers	Total and Average Costs
Average Number Daily Resident	1,964	1,045	645	193	3,847
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Total Expenditure	1,237,577 11 3	516,620 10 0	446,416 16 5	149,980 6 3	2,350,595 3 11
Sales	5,637 1 6	816 1 9	3,161 7 4	10 19 6	9,625 10 1
Collections	84,500 8 10	1,113 12 1	2,890 1 4	1,376 18 0	89,881 0 3
Net Expenditure	1,147,440 0 11	514,690 16 2	440,365 7 9	148,592 8 9	2,251,088 13 7
					Average Costs
Gross Cost per Patient per annum	630 2 7	494 7 6	692 2 5	777 2 0	611 0 5
Net Cost per Patient per annum	584 4 9	492 10 6	682 14 9	769 18 2	585 3 1
Gross Cost per Patient per week	12 1 8	9 9 7	13 5 6	14 18 1	11 14 4
Net Cost per Patient per week	11 4 1	9 8 11	13 1 10	14 15 4	11 4 5

TABLE XCVI

STATEMENT SHOWING EXPENDITURE BY THE DEPARTMENT OF PUBLIC WORKS AT MENTAL HOSPITALS AND THE EPILEPTIC HOME DURING THE FINANCIAL YEAR 1961–62

Place	Expenditure 1961-62		
	Revenue Fund	Loan Fund	Total
	£ s. d.	£ s. d.	£ s. d.
Mental Hospitals—			
Brisbane (Excluding Expenditure at the Repatriation Hospital)	30,656 12 9	51,143 12 3	81,800 5 0
Charters Towers	1,293 8 10	4,469 5 6	5,762 14 4
Ipswich	8,031 19 4	51,735 2 5	59,767 1 9
Toowoomba	14,051 0 3	206,406 3 4	220,457 3 7
Epileptic Home—			
Toowoomba	5,939 18 2	3,923 18 8	9,863 16 10
	£59,972 19 4	£317,678 2 2	£377,651 1 6

DETAILS OF EXPENDITURE ON MAJOR WORKS MENTAL HOSPITALS

		Expenditure 1961–62
		£ s. d.
Brisbane	Erection of three chapels	27,104 10 0
	Repairs, Renovations and Repainting—Various Buildings	17,438 15 1
	Conversion of Dormitory and Basement to Training Centre for Children	3,036 4 2
	Improvement to Electricity Supply	2,601 9 8
	Erection of New General Store	2,144 9 5
Ipswich	Additions and Alterations to Male Ward 3	43,256 6 1
	Repairs and Remodelling Interior and Exterior Painting, &c.	4,103 16 5
	Extensions to Laundry	2,230 18 6
Toowoomba	Erection of T.B. Ward	181,429 11 4
	Improvement to Water Supply	7,230 6 5
	Repairs, Repainting Various Buildings	5,333 13 11
	Dismantling Boiler and erection of new Boiler	2,387 18 4
	Resealing Bitumen Surface Roadways	2,373 14 8
Epileptic Home— Toowoomba	Exterior and Interior Repainting, Replacement of defective ceilings	4,168 1 8
	Improvements to Bathrooms and Toilets	3,830 17 7

TABLE XCVII

PSYCHIATRIC CLINIC

1. Summary of New Patients Registered During the Year 1961–1962

	Under 18		18–19		20–29		30–39		40–49		50–59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
300 *Schizophrenic disorders—*																	
300·0 Simple type	1	1	1	1	2	4	..	2	1	..	..	1	..	..	5	9	14
300·1 Hebephrenic type	1	1	..	..	1	3	1	3	..	4	1	2	..	2	4	15	19
300·3 Paranoid type	..	..	..	..	6	5	6	12	2	15	4	6	..	1	18	39	57
300·4 Acute schizophrenic reaction	1	1	..	1	7	2	3	3	..	..	..	..	..	..	11	7	18
300·5 Latent schizophrenia	..	..	2	1	1	1	3	1	..	1	..	..	..	..	6	4	10
300·7 Other and unspecified	1	..	1	..	1	2	1	3	..	3	1	..	..	..	5	8	13
301 *Manic-depressive reaction*																	
301·0 Manic and circular	..	..	1	..	..	..	..	1	1	1	1	..	..	1	3	3	6
301·1 Depressive	..	..	..	..	1	..	3	2	2	1	3	2	3	4	12	9	21
301·2 Other	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	2
302 Involutional melancholia	..	..	..	..	..	..	..	..	..	1	1	3	..	3	1	7	8
303 Paranoia and paranoid states	..	..	..	..	1	..	1	..	..	2	..	2	..	..	2	4	6
304 Senile psychosis	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	3
306 Psychosis with cerebral arteriosclerosis	..	..	..	..	..	..	..	..	1	..	..	..	1	1	2	1	3
307 Alcoholic psychosis	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	1	2
308 *Psychosis of other demonstrable etiology—*																	
308·1 Resulting from epilepsy and other convulsive disorders	..	..	..	..	1	..	1	1	..	..	..	..	..	..	2	1	3
308·2 Other	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
309 Other and unspecified psychoses	..	..	..	..	..	..	..	..	2	..	1	..	..	..	3	..	3
310 Anxiety reaction without mention of somatic symptoms	..	..	1	..	5	8	9	21	5	14	4	6	..	..	24	49	73
311 Hysterical reaction without mention of anxiety reaction	..	..	..	2	..	4	1	6	..	6	..	2	..	..	1	20	21
312 Phobic reaction	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
313 Obsessive-compulsive reaction	..	..	..	..	..	1	1	..	..	1	..	1	..	..	1	3	4
314 Neurotic-depressive reaction	..	..	1	1	2	3	5	17	4	13	..	9	1	7	13	50	63
315 *Psychoneurosis with somatic symptoms affecting circulatory system—*																	
315·0 Neurocirculatory asthenia	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
315·2 Other circulatory manifestations of psychogenic origin	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
316 *Psychoneurosis with somatic symptoms affecting digestive system—*																	
316·0 Mucous colitis specified as of psychogenic origin	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
316·3 Other digestive manifestations specified as of psychogenic origin	..	..	..	..	1	..	..	..	1	..	..	1	..	..	2	1	3
317 *Psychoneurosis with somatic symptoms affecting other systems—*																	
317·1 Psychogenic reactions affecting genito-urinary system	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
317·2 Pruritus of psychogenic origin	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
317·5 Psychogenic reactions affecting other systems	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	1	2
318 *Psychoneurotic disorders, other, mixed and unspecified—*																	
318·0 Hypochondriacal reaction	..	..	..	..	..	..	..	..	..	1	1	1	..	..	1	2	3
318·4 Mixed	..	..	..	..	1	..	..	..	..	1	..	2	..	..	1	3	4
318·5 Other and unspecified types	..	..	..	..	..	..	..	1	..	1	1	..	1	..	2	2	4
320 *Pathological personality—*																	
320·0 Schizoid personality	1	2	5	1	8	1	3	2	..	..	..	1	..	..	17	7	24
320·1 Paranoid personality	1	..	..	..	1	..	2	..	3	1	2	..	..	..	9	1	10
320·2 Cyclothymic personality	..	..	..	..	1	..	..	..	1	..	1	1	..	..	3	1	4
320·3 Inadequate personality	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	3	3
320·4 Antisocial personality	..	1	1	..	2	..	..	..	..	1	..	..	..	..	3	2	5
320·5 Asocial personality	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
320·6 Sexual deviation	..	..	..	..	4	..	..	..	3	..	..	..	..	..	7	..	7
320·7 Other and unspecified	2	..	1	..	4	2	2	3	2	1	..	1	..	..	11	7	18
321 *Immature personality—*																	
321·0 Emotional instability	..	1	..	1	..	1	..	..	..	1	1	..	..	..	1	4	5
321·1 Passive dependency	..	3	..	1	1	3	..	..	..	..	..	..	..	..	1	7	8
321·2 Aggressiveness	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
321·4 Other symptomatic habits except speech impediments	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
321·5 Other and unspecified	..	1	..	..	..	5	..	2	1	1	..	..	..	..	1	9	10
322 *Alcoholism—*																	
322·1 Chronic	..	..	..	..	1	1	3	..	1	2	1	1	..	..	6	4	10
322·2 Unspecified	..	..	..	..	..	..	..	..	3	1	..	..	..	..	3	1	4
323 Other drug addiction	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	1	2
324. Primary childhood behaviour disorders	1	3	..	..	..	..	..	..	..	..	..	..	..	..	1	3	4
325 *Mental deficiency—*																	
325·1 Imbecility	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	1	2
325·2 Moron	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	2
325·3 Borderline intelligence	1	1	..	..	..	..	..	..	..	1	..	..	..	..	1	2	3
325·4 Mongolism	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
325·5 Other and unspecified types	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1

TABLE XCVII—*continued*

—	Under 18		18–19		20–29		30–39		40–49		50–59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
326 *Other and unspecified character, behaviour and intelligence disorders*—																	
326·3 Acute situational maladjustment	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	3	3
326·4 Other and unspecified	..	..	1	1	1	..	1	1	1	..	..	..	..	..	4	2	6
353 *Epilepsy*—																	
353·1 Grand mal	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
353·3 Other	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
No psychiatric abnormality	..	2	1	..	..	2	4	3	4	..	1	..	1	..	11	7	18
Stammer	..	..	3	1	6	1	..	..	..	..	..	..	1	..	10	2	12
Aphasia	..	..	..	..	..	..	1	..	..	..	1	..	2	..	4	..	4
Dysphasia	..	..	..	..	..	..	..	..	..	..	1	1	1	1	2	2	4
Laryngectomy	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2	..	2
Partially deaf	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Aphonia	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
Dysphonia	..	..	..	..	2	..	..	..	2	..	..	..	..	..	4	..	4
Dysarthria	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
Not yet diagnosed	1	..	2	1	..	1	1	1	2	1	2	1	1	..	9	5	14
Total	14	20	24	12	61	55	54	89	45	77	33	48	13	25	244	326	570

TABLE XCVIII

SOURCES OF REFERRAL OF PATIENTS TO PSYCHIATRIC CLINIC, YEAR ENDED 30TH JUNE, 1962

—	Male	Female	Total
Self referrals	68	84	152
Mental hospitals	40	134	174
Medical practitioners	36	40	76
Commonwealth Government Departments	9	3	12
State Government Departments—			
Justice	30	4	34
Youth Welfare and Guidance	10	32	42
General Hospitals	14	11	25
Other	21	4	25
Organisations—non-official—			
Church	6	6	12
Marriage Guidance	2	3	5
Other	8	5	13
Total	244	326	570

TABLE XCIX

PSYCHIATRIC CLINIC

2. SUMMARY OF PATIENTS CONTINUING IN TREATMENT FROM THE PREVIOUS YEAR, 1960–1961, INTO THE CURRENT YEAR, 1961–1962

—	Under 18		18–19		20–29		30–39		40–49		50–59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
300 *Schizophrenic disorders*—																	
300·0 Simple type	..	..	..	1	1	1	5	3	1	3	2	1	..	..	9	9	18
300·1 Hebephrenic type	1	..	..	..	1	2	2	9	1	9	4	14	..	9	9	43	52
300·2 Catatonic type	..	..	..	..	1	3	2	..	1	..	..	..	..	..	4	3	7
300·3 Paranoid type	..	..	..	..	3	2	9	7	12	8	6	9	3	2	33	28	61
300·4 Acute schizophrenic reaction ..	..	1	1	..	2	..	..	3	..	3	1	2	..	..	4	9	13
300·5 Latent schizophrenia	..	..	..	..	2	2	3	3	3	4	..	..	..	..	8	9	17
300·6 Schizo-affective psychosis ..	..	..	..	..	1	..	1	1	..	1	1	..	..	1	3	3	6
300·7 Other and unspecified	..	..	..	..	2	1	1	3	2	3	..	3	..	..	5	10	15
301 *Manic-depressive reaction*—																	
301·0 Manic and circular	..	..	..	..	..	..	1	..	..	4	1	4	2	..	4	8	12
301·1 Depressive	..	..	..	..	..	..	1	2	2	5	2	5	3	5	8	17	25
301·2 Other	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	2
302 Involutional melancholia	..	..	..	..	..	..	..	..	..	2	..	1	..	2	..	5	5
303 Paranoia and paranoid states	..	..	..	..	..	..	..	..	..	4	..	1	..	1	..	6	6
304 Senile Psychosis	..	..	..	..	..	..	..	..	..	..	..	..	1	8	1	8	9
305 Presenile psychosis	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
307 Alcoholic psychosis	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
308 *Psychosis of other demonstrable etiology*—																	
308·1 Resulting from epilepsy and other convulsive disorders	..	..	..	..	..	1	1	..	..	..	..	1	..	..	1	2	3
308·2 Other	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
309 Other and unspecified psychoses ..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
310 Anxiety reaction without mention of somatic symptoms	..	..	..	1	1	1	4	13	2	7	1	2	1	2	9	26	35
311 Hysterical reaction without mention of anxiety reaction	..	..	..	..	..	..	1	4	..	13	..	1	..	1	1	19	20
312 Phobic reaction	..	..	..	..	..	..	1	..	..	1	1	1	..	..	2	2	4
313 Obsessive-compulsive reaction	..	..	..	..	1	..	1	2	..	2	1	..	..	..	3	4	7
314 Neurotic-depressive reaction	..	..	..	..	1	2	2	5	4	21	4	7	4	6	15	41	56

TABLE XCIX—*continued*

——	Under 18		18–19		20–29		30–39		40–49		50–59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
316 *Psychoneurosis with somatic symptoms affecting digestive system—*																	
316·2 Gastric neuroses	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
316·3 Other digestive manifestations	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
317 *Psychoneurosis with somatic symptoms affecting other systems—*																	
317·1 Psychogenic reactions affecting genito-urinary system	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1
317·3 Other cutaneous neuroses	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
317·4 Psychogenic reactions affecting musculoskeletal system	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
317·5 Psychogenic reactions affecting other systems	..	..	..	..	..	..	..	2	..	3	1	1	..	1	1	7	8
318 *Psychoneurotic disorders, other, mixed and unspecified—*																	
318·0 Hypochondriacal reaction	..	..	..	..	..	..	..	..	..	1	2	1	..	1	2	3	5
318·3 Asthenic reaction	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	3	3
318·4 Mixed	..	..	..	..	..	..	1	..	1	5	..	..	..	..	2	5	7
318·5 Other and unspecified types	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
320 *Pathological personality—*																	
320·0 Schizoid personality	..	..	..	..	4	1	3	..	3	..	..	1	..	..	10	2	12
320·1 Paranoid personality	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2	..	2
320·3 Inadequate personality	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	1	2
320·4 Antisocial personality	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
320·5 Asocial personality	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	1	2
320·6 Sexual deviation	..	..	..	..	5	..	1	..	1	..	1	..	4	..	12	..	12
320·7 Other and unspecified	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	2
321 *Immature personality—*																	
321·0 Emotional instability	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	1	2
321·1 Passive dependency	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	3	3
321·2 Aggressiveness	..	..	..	..	1	2	1	..	..	..	..	..	..	..	2	2	4
321·4 Other symptomatic habits except speech impediments	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
321·5 Other and unspecified	1	..	..	..	..	1	2	1	..	..	..	..	..	..	3	2	5
322 *Alcoholism—*																	
322·1 Chronic	..	..	..	..	..	..	2	1	..	1	1	..	..	..	3	2	5
322·2 Unspecified	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
324 Primary childhood behaviour disorders	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
325 *Mental deficiency—*																	
325·1 Imbecility	..	..	..	..	1	1	2	..	..	2	..	..	1	..	4	3	7
325·2 Moron	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1	2
325·3 Borderline intelligence	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
325·4 Mongolism	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
325·5 Other and unspecified types	1	..	..	..	1	..	..	..	1	..	..	..	..	..	3	..	3
343 Post encephaletic behaviour disorder	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
351 Spastic	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	2
353 *Epilespy—*																	
353·0 Petit mal	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	1	2
353·1 Grand mal	..	..	..	..	1	..	2	1	..	3	..	..	..	..	3	4	7
353·3 Other	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
355 Huntington's Chorea	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	2	3
794 Early senile degeneration (without psychosis)	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
No psychiatric abnormality	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2	..	2
Stammer	..	..	..	2	4	..	..	1	..	1	1	..	..	..	5	4	9
Aphasia	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
Laryngectomy	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
Total	5	2	3	5	37	23	53	72	39	110	31	61	22	43	190	316	506

TABLE C
PSYCHIATRIC CLINIC

3. Summary of Patients Discharged in Previous Years Who Have Received Treatment in the Current Year, 1961–1962

——	Under 18		18–19		20–29		30–39		40–49		50–59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
300 *Schizophrenic disorders—*																	
300·0 Simple type	..	..	..	..	6	1	2	2	1	1	1	..	..	..	10	4	14
300·1 Hebephrenic type	..	..	..	..	2	2	3	2	1	4	1	4	..	4	7	16	23
300·2 Catatonic type	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2	2
300·3 Paranoid type	..	..	..	..	5	1	6	11	4	5	5	6	..	..	20	23	43
300·4 Acute schizophrenic reaction	..	..	..	..	2	1	..	1	..	..	..	..	..	..	2	2	4
300·5 Latent schizophrenia	..	..	..	..	1	1	1	..	..	..	..	..	..	..	2	1	3
300·6 Schizo-affective psychosis	..	..	..	..	..	..	2	2	1	1	..	1	..	1	3	5	8
300·7 Other and unspecified	..	..	..	..	..	1	2	2	3	..	1	..	..	..	6	3	9
301 *Manic-depressive reaction—*																	
301·0 Manic and circular	..	..	..	..	..	..	..	..	1	2	..	..	..	2	1	4	5
301·1 Depressive	..	..	..	..	..	..	..	1	1	1	..	6	..	3	1	11	12
301·2 Other	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
302 Involutional melancholia	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2	2
303 Paranoia and paranoid states	..	..	..	..	1	..	..	..	..	..	1	..	1	..	3	..	3
304 Senile psychosis	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
307 Alcoholic psychosis	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1

TABLE C—*continued*

—	Under 18		18–19		20–29		30–39		40–49		50–59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
308 *Psychosis of other demonstrable etiology*—																	
308·1 Resulting from epilepsy and other convulsive disorders	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	2	2
309 Other and unspecified psychoses	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1
310 Anxiety reaction without mention of somatic symptoms	..	..	..	1	1	..	1	4	..	2	..	1	1	2	3	10	13
311 Hysterical reaction without mention of anxiety reaction	..	..	..	..	..	1	..	3	1	2	..	..	..	..	1	6	7
313 Obsessive-compulsive reaction	..	..	..	..	..	1	..	1	..	..	..	2	..	..	..	4	4
314 Neurotic-depressive reaction	..	..	..	..	1	..	..	4	..	2	..	3	1	2	2	11	13
317 *Psychoneurosis with somatic symptoms affecting other systems*—																	
317·2 Pruritus of psychogenic origin	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
317·3 Other cutaneous neuroses	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
317·5 Psychogenic reactions affecting other systems	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	3	3
318 *Psychoneurotic disorders, other, mixed and unspecified*—																	
318·0 Hypochondriacal reaction	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
318·3 Asthenic reaction	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
318·4 Mixed	..	..	..	..	..	2	..	..	1	3	..	..	..	..	1	5	6
318·5 Other and unspecified types	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
320 *Pathological personality*—																	
320·0 Schizoid personality	1	..	1	..	2	..	..	2	..	..	..	..	..	..	4	2	6
320·1 Paranoid personality	..	..	..	..	..	..	1	2	..	..	..	..	..	..	1	2	3
320·3 Inadequate personality	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
320·4 Antisocial personality	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
320·7 Other and unspecified	..	..	1	1	..	1	1	..	..	..	..	..	..	..	2	2	4
321 *Immature personality*—																	
321·0 Emotional instability	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	2
321·5 Other and unspecified	..	..	..	..	..	1	..	3	..	..	..	..	..	..	..	4	4
322 *Alcoholism*—																	
322·1 Chronic	..	..	..	..	..	..	..	1	1	..	1	..	..	..	2	1	3
322·2 Unspecified	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1
324 Primary childhood behaviour disorders	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
325 *Mental deficiency*—																	
325·1 Imbecility	..	..	1	..	..	..	1	..	..	..	..	..	..	..	2	..	2
325·2 Moron	..	..	..	1	1	..	1	..	..	..	..	..	..	..	2	1	3
325·3 Borderline intelligence	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
325·5 Other and unspecified types	..	..	1	..	..	1	..	..	..	..	..	..	1	..	2	1	3
326 *Other and unspecified character, behaviour and intelligence disorders*—																	
326·4 Other and unspecified	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
353 *Epilepsy*—																	
353·0 Petit mal	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	1	2
353·3 Other	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
Stammer	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2	..	2
Deafness	1	..	..	..	1	2	..	..	..	..	..	..	..	..	2	2	4
Total	3	2	7	4	25	20	23	45	18	27	10	27	5	15	91	140	231

TOTAL NUMBER OF ALL PATIENTS WHO HAVE RECEIVED TREATMENT DURING THE YEAR 1961–62

Table XCVII	570
Table XCVIII	506
Table XCIX	231
Grand Total	1,307

Number of Psychiatric Consultations		5,621
Number of Speech Therapy Consultations—		
Psychiatric Clinic	625	
Welfare and Guidance Clinic	2,040	
		2,665
Total		8,286

REFERRAL OF PATIENTS FROM CLINIC TO OTHER PSYCHIATRIC UNITS DURING THE YEAR 1961–62

Mental Hospitals		64
North Brisbane Hospital—		
Lowson House	21	
Ward 16	22	
	—	43
Total		107

TABLE CI
PSYCHIATRIC CLINIC

4. Forensic Clinic—Analysis of Examinations of Patients (Already Included in Previous Tables) Referred by or Through The Department of Justice

	Under 18		18–19		20–29		30–39		40–49		50–59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Parole Board																	
300 *Schizophrenic disorders*—																	
300·0 Simple type	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
300·7 Other and unspecified	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
303 Paranoia and paranoid states	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
320 *Pathological personality*—																	
320·0 Schizoid personality	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2	..	2
320·1 Paranoid personality	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
320·6 Sexual deviation	..	..	..	..	..	..	1	..	..	..	..	..	1	..	2	..	2
320·7 Other and unspecified	..	..	..	1	..	1	..	..	1	..	..	..	..	..	3	..	3
322 *Alcoholism*—																	
322·1 Chronic	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
322·2 Unspecified	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
326 *Other and unspecified character, behaviour and intelligence disorders*—																	
326·4 Other and unspecified	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
No psychiatric abnormality	..	..	..	..	..	..	1	..	1	..	..	..	1	..	3	..	3
Total	..	..	2	..	3	..	4	..	6	..	..	..	2	..	17	..	17
Pre-Sentence Reports																	
307 Alcoholic psychosis	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
320 *Pathological personality*—																	
320·6 Sexual deviation	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
320·7 Other and unspecified	2	..	..	..	..	..	..	..	..	..	..	1	..	..	2	1	3
325 *Mental deficiency*—																	
325·5 Other and unspecified	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	2
No psychiatric abnormality	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..	2
Total	3	..	1	..	..	..	2	..	1	..	1	1	..	..	8	1	9
Probation Officer and Police Referrals																	
300 *Schizophrenic disorders*—																	
300·0 Simple type	..	..	..	..	2	..	1	..	..	..	..	..	..	..	3	..	3
300·4 Acute schizophrenic reaction	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
301 *Manic-depressive reaction*—																	
301·0 Manic and circular	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
310 Anxiety reaction without mention of somatic symptoms	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
320 *Pathological personality*—																	
320·0 Schizoid personality	2	..	1	..	..	..	..	..	..	..	..	..	..	..	3	..	3
320·1 Paranoid personality	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
320·4 Antisocial personality	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	1	2
320·6 Sexual deviation	..	..	..	..	2	..	..	..	1	..	..	..	1	..	4	..	4
320·7 Other and unspecified	..	..	1	..	..	..	1.	1	..	..	..	..	..	..	2	1	3
325 *Mental deficiency*—																	
325·1 Imbecility	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
No psychiatric abnormality	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
Total	4	..	2	..	5	..	2	3	2	..	1	..	2	..	18	3	21
Prison Referrals																	
320 *Pathological personality*—																	
320·6 Sexual deviation	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
320·7 Other and unspecified	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
321 *Immature personality*—																	
321·2 Aggressiveness	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
325 *Mental deficiency*—																	
325·3 Borderline intelligence	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Total	..	1	1	..	1	..	1	..	..	..	..	..	..	..	3	1	4
Examined by Order of Executive Council																	
300 *Schizophrenic disorders*—																	
300·3 Paranoid type	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
300·5 Latent schizophrenia	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
301 *Manic-depressive reaction*—																	
301·1 Depressive	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
320 *Pathological personality*—																	
320·0 Schizoid personality	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
320·6 Sexual deviation	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
325 *Mental deficiency*—																	
325·1 Imbecility	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	2
353 *Epilepsy*—																	
353·3 Other	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Total	..	..	1	..	1	1	1	1	1	..	1	..	1	..	6	2	8
Grand total	7	1	7	..	10	1	10	4	10	..	3	1	5	..	52	7	59

Number of Consultations at Her Majesty's Prison ..	64
Number of Consultations at Psychiatric Clinic ..	111
Number of Consultations at Mental Hospitals ..	11
Total	186

TABLE CII

POPULATION CHANGES AT EPILEPTIC HOME DURING THE YEAR 1961–62

PATIENTS AT 30TH JUNE, 1961 : MALES 48 ; FEMALES 55 ; TOTAL 103

FOR YEAR ENDED 30TH JUNE, 1962

Aged	Admitted		Discharged		Mental Hospital		Deaths		Remaining		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
Under 5 years	..	..	..	..	..	..	..	..	..	..	..
6 years	..	..	..	..	..	..	..	..	..	..	..
7 years	..	..	1	..	..	..	..	..	..	..	..
8 years	..	..	..	..	..	..	..	..	..	..	..
9 years	..	..	..	..	..	..	..	..	..	..	..
10 years	1	..	1	..	..	..	..	..	..	1	1
11 years	1	..	..	..	..	..	..	..	1	..	1
12 years	..	..	..	..	..	..	..	..	..	1	1
13 years	..	..	..	..	..	..	..	..	1	..	1
14 years	..	1	..	..	..	..	1	..	2	2	4
15 years	..	..	..	..	..	..	..	..	1	..	1
16 years	..	..	..	..	..	..	..	..	1	3	4
17 years	..	..	..	..	..	..	..	..	..	1	1
18 years	..	..	..	..	..	..	1	..	6	..	6
19 years	..	..	..	..	..	..	..	..	..	..	..
20 years	..	1	..	..	..	..	..	..	1	1	2
21–25 years	1	..	..	..	..	..	..	..	7	7	14
25–30 years	..	2	..	..	..	..	..	..	5	8	13
30–35 years	..	..	..	..	..	..	..	..	7	3	10
35–40 years	..	..	..	..	..	..	..	..	4	4	8
40–45 years	..	..	..	..	..	..	..	..	2	7	9
45–50 years	..	..	..	..	..	..	..	..	2	7	9
50–55 years	1	..	..	..	..	..	..	..	5	4	9
55–60 years	..	..	..	..	..	..	..	..	2	..	2
55 years	..	..	..	..	..	..	..	..	..	2	2
56 years	..	..	..	..	..	..	..	..	..	2	2
57 years	..	..	..	..	..	..	..	..	..	1	1
58 years	..	..	..	..	..	..	..	..	..	..	..
59 years	..	..	..	..	..	..	..	..	..	1	1
60 years	..	..	..	..	..	..	..	..	..	..	..
61 years	..	..	..	..	..	..	..	..	..	2	2
62 years	..	..	..	..	..	..	..	..	..	..	..
63 years	..	..	..	..	..	..	..	..	..	1	1
64 years	..	..	..	..	..	..	..	..	..	..	..
65 years	..	..	..	..	..	..	..	..	..	..	..
66 years	..	..	..	..	..	..	..	..	..	1	1
67 years	..	..	..	..	..	..	..	..	..	..	..
68 years	..	..	..	..	..	..	..	..	..	..	..
69 years	..	..	..	..	..	..	..	..	..	..	..
70 years	..	..	..	..	..	..	..	..	..	..	..
71 years	..	..	..	..	..	..	..	..	..	..	..
72 years	..	..	..	..	..	..	..	..	1	..	1
Totals	4	4	2	..	..	..	2	..	48	59	107

PATIENTS RESIDENT—

Under 5 years	27
5–10 years	25
10–15 years	18
15–20 years	9
Over 20 years	28
	107

CAUSE OF DEATH—

Male aged 18 years. Acute Myocardic Failure, Epilepsy, Mental Deficiency.

Male aged 14 years. Deceased whilst on Leave. Cause of Death unknown.

TABLE CIII

EXPENDITURE TABLE, EPILEPTIC HOME, FOR THE TWELVE MONTHS ENDED 30TH JUNE, 1962

Average Number Daily Resident—103

	£	*s.*	*d.*
Gross Expenditure	42,674	14	8
Collections	17,187	9	3
Net Expenditure	25,487	5	5
Gross Cost per patient per annum	414	6	4
Net Cost per patient per annum	247	9	0
Gross Cost per patient per week	7	18	11
Net Cost per patient per week	4	14	11

DIVISION OF WELFARE AND GUIDANCE

Senior Medical Director: B. J. PHILLIPS, M.B., B.S. (Qld.), D.P.M. (London).

Medical Director: B. NURCOMBE, M.B., B.S. (Qld.), D.P.M. (Melb.).

Medical Director: I. CHARLES, M.B., B.S. (Melb.), D.P.M. (Melb.).

Medical Director: W. LEGGAT, L.R.C.P., L.R.C.S. (Edinburgh) L.R.F.P.S. (Glasgow).

Medical Officer: J. LOWREY, M.B., B.S. (Qld.).

There has been expansion of the activities of this Division during the year. Wilson Youth Hospital was opened on 5th July, 1961, and the Treatment Centre for Handicapped Children was opened at Chermside Hospital on 10th January, 1962. Both official ceremonies were performed by the Minister for Health and Home Affairs, Dr. H. W. Noble. Distinguished guests at these functions remarked that both institutions are unique and supply an important service to the State.

Other expansions of child guidance services occurred with visits of staff members to Westbrook Farm Home for Boys and to Wooloowin State Home. The liaison and co-operation between the Division of Welfare and Guidance and the State Children Department has been continually increasing with help and benefit to both Departments and to the children treated.

MARY STREET CHILD GUIDANCE CENTRE

The total number of new patients and their families seen at the Centre this year was 568 of whom 386 were males and 182 females. There were 491 cases continued in treatment from the previous year. Also 95 cases (60 males, 35 females) were referred for psychological testing only. Fewer new cases were seen at Mary Street Centre this year than last because the medical staff had to divide its time between Mary Street and Wilson Hospital due to staff shortages.

TABLE CIV

SHOWING AGES OF NEW PATIENTS ATTENDING CENTRE

Age Group	Number	Percentage
0– 4 years	99	17
5– 9 years	239	42
10–14 years	174	31
15 years and over	56	10

The age distribution of the children attending Mary Street shown in Table CIV is approximately the same as last year with about three-quarters of the children being of school age. Last year the number of toddlers in the 0–4 age group dropped from 20 per cent. to 12 per cent. This year it has risen again to 17 per cent. The reason for this is uncertain.

Table CV showing distribution of intelligence in those children in whom it was tested does not differ a great deal from last year.

TABLE CV

SHOWING DISTRIBUTION OF INTELLIGENCE IN 411 CHILDREN

ntellectual Classification (Wechsler)	I.Q. Range	Number of Children
Mental Defect	30–70	62
Borderline Mental Defect	71–80	55
Dull Normal	81–90	86
Average	91–110	160
Bright Normal	111–120	35
Superior	121–130	11
Very Superior	131 and above	2
Total	..	411

The children being treated at Mary Street Centre attended a variety of schools as shown in Table CVI.

TABLE CVI

SHOWING SCHOOLS ATTENDED BY CHILDREN COMING TO THE CENTRE

Had not commenced school (too young)	125
School—State	255
School—Private	86
School—Other (Correspondence, Opportunity, Disability, &c.)	25
School—Unspecified	34
Employed	16
Unemployed	14
Mentally defective—not at school or employed	13
	568

Children are referred to Mary Street Centre from a number of sources. Table CVII shows the source of referral of the patients and Table CVIII shows the reason for referral. Again, as last year, most were from various health agencies together with the family doctor arranged most of the medical referrals. Another large source was the parents themselves. Most were for behaviour and speech disorders.

TABLE CVII

SHOWING MODES OF REFERRAL OF NEW PATIENTS

Mode	Number of Patients
Education Agencies—	
Schools, &c.	48
Health Agencies—	
Medical practitioners, hospitals, &c.	253
Welfare Agencies—	
State Children Department, Queensland Bush Children's Health Scheme, &c.	31
Private Individuals	225
Miscellaneous	11
Total	568

TABLE CVIII

SHOWING REASONS FOR REFERRAL OF PATIENTS TO CENTRE

Reason	Number	Percentage
Reasons associated with Anti-Social Behaviour	31	5
Reasons associated with Education	81	14
Reasons associated with Employment	11	2
Reasons associated with Behaviour Disorders	139	24
Reasons associated with Habits	13	2
Reasons associated with Mental Deficiency	33	6
Reasons associated with Organic Brain Disorder	17	3
Reasons associated with Personality Disorders	37	7
Reasons associated with Psychosomatic Symptoms and Sensory Defects	13	2
Reasons associated with Elimination	28	5
Reasons associated with Sexual Behaviour Disorder	4	1
Reasons associated with Sleep	3	1
Reasons associated with Speech	155	27
Miscellaneous Reasons	3	1
Totals	568	100

Table CIX gives some information about family background. As usual a relatively large number of children were adopted or from broken homes.

TABLE CIX

SHOWING STATE OF CHILD'S PARENTS

(Based on where the child lived while attending Clinic)

Natural Parents (lives with own father and mother)	381
Child adopted	35
Child with foster parents	5
Institutions—Child lives in Church Home or similar institution	21
Child with mother (father dead)	19
Child with father (mother dead)	2
Child with mother and step father	16
Child with father and step mother	3
Child with mother (father deserted, separated, divorced)	30
Child with adoptive mother (adoptive father divorced)	1
Child with relatives	7
Child in boarding school	3
	523

A study of the racial origin of children treated showed nothing significant. Of 541 patients it was shown that 511 were of British descent.

As will be seen in Table CX most patients came from the Greater Brisbane area.

TABLE CX

SHOWING AREAS FROM WHICH CHILDREN IN 557 CASES CAME TO THE CENTRE

Area	Number
Brisbane and Suburbs	439
Children's institutions in or near Brisbane	22
Areas outside Brisbane, i.e. country towns, &c.	96
	557

Of the children referred because of some speech difficulty, some would be treated by purely psychiatric means, while others would be interviewed and treated by Speech Therapists, who saw 138 new patients during the year. Table CXI gives the age distribution and Table CXII shows the mode of referral for these patients.

TABLE CXI

SHOWING AGES OF CHILDREN HAVING SPEECH THERAPY AT THE CENTRE

Age	Number
0– 4 years	51
5– 9 years	56
10–14 years	18
15 years and over	13
	138

TABLE CXII

SHOWING MODES OF REFERRAL OF PATIENTS WITH SPEECH DISORDERS

Mode	Number
Education Agencies	6
Health Agencies	72
Welfare Agencies	7
Individuals	52
Miscellaneous	1
	138

The E.E.G.

Electroencephalograph investigations are now carried out at Mary Street Centre, as the Division has its own E.E.G. machine. A total of 424 E.E.G.'s were performed on patients of Mary Street Centre, Wilson Youth Hospital, Chermside Babies' Unit and the Psychiatric Clinic.

Overall, 57·3 per cent. of the patients tested had abnormal E.E.G.'s. Of the 215 children attending Mary Street Centre who had E.E.G.'s performed, 62·6 per cent. were abnormal. Of those boys in Wilson Hospital who had E.E.G.'s done, 59·3 per cent. showed an abnormal rhythm.

Next year more E.E.G. tests will be done as part of this year was spent in setting up the machine and training technicians.

WESTBROOK FARM HOME

Psychiatrists saw 115 boys at Westbrook during the year. The age distribution of these boys is given in Table CXIII.

TABLE CXIII

SHOWING AGES OF BOYS SEEN AT WESTBROOK

Age (Years)	Number
11	1
12	1
13	3
14	17
15	23
16	47
17	23
	115

Table CXIV shows that offences against property were the most usual reason for which the boys were committed to Westbrook. Other relevant figures are given in the following tables.

TABLE CXIV

SHOWING OFFENCES FOR WHICH BOYS SEEN BY THE CLINIC STAFF WERE COMMITTED TO WESTBROOK

Offence	Number
Offence against person (assault, &c.)	8
Offence against property (stealing, &c.)	88
Other (uncontrollable, truanting)	12
Total	108

TABLE CXV

SHOWING THE INTELLIGENCE OF 39 BOYS TESTED AT WESTBROOK

Intellectual Classification (Wechsler)	I.Q. Range	Number
Mental Defect	51–70	5
Borderline Mental Defect	71–80	8
Dull Normal	81–90	9
Average	91–110	15
Bright Normal	111–120	2
Total		39

TABLE CXVI

SHOWING HOME BACKGROUND IN 98 CASES SEEN BY THE CLINIC STAFF AT WESTBROOK

Lived with natural parents	54
Lived with mother and step father	11
Lived with father and step mother	1
Lived with mother (father dead)	5
Lived with father (mother dead)	2
Lived with father (mother insane)	1
Lived with father (mother deserted)	3
Lived with mother (father deserted, separated, divorced)	12
Lived with relatives	4
Lived with friends	1
Lived with foster parents	3
Lived in institutional home	1
Total	98

WOOLOOWIN CHILDREN'S HOME

The number of children seen at this Home was 87, of whom 58 were males and 29 females. The Division is mainly concerned with Child Guidance aspects of the Home and in the mental assessment of babies and small children.

Some relevant figures are given below.

TABLE CXVII

SHOWING AGES OF CHILDREN SEEN AT WOOLOOWIN

Age	Number of Children
0–4 years	69
5–9 years	10
10–14 years	6
15 years and over	2
Total	87

TABLE CXVIII

SHOWING CAUSES FOR ADMISSION IN 68 CASES

Ex-nuptial, mother unable to support	34
Father deserted, mother unable to support	3
Father in goal, mother unable to support	2
Mother insane	7
Mother epileptic, father insane	1
Mother deserted, father unable to look after	2
Both parents deserted	1
Parents unable to support	2
Parents incapable of looking after	1
Child charged as uncontrollable	2
Child charged as neglected, no further information	9
Re-admittance from foster home—behaviour problem	4
Total	68

WILSON YOUTH HOSPITAL

This hospital was opened on 5th July, 1961, but was not fully functioning for some months. A total of 163 boys were in-patients during the year.

The daily average of in-patients was 25. The average length of stay was 49 days; the range being from one day, for a number of boys on remand, to several months for others as in-patients.

Some relevant tables are given below concerning activities at Wilson Hospital.

TABLE CXIX

SHOWING AGES OF IN-PATIENTS OF WILSON YOUTH HOSPITAL

Age Group	Number
9–13 years	34
14 years and over	116
Total	150

TABLE CXX

SHOWING OFFENCES WITH WHICH BOYS WERE CHARGED

Offence	Number
Offences against person (assault, &c.)	11
Offences against property (stealing, &c.)	108
Other (uncontrollable, truancy, &c.)	32
Total	151

TABLE CXXI

SHOWING INTELLIGENCE DISTRIBUTION FOR 75 CASES

Intellectual Classification (Wechsler)	I.Q. Range	Number
Mental Defect	41–70	14
Borderline Mental Defect	71–80	11
Dull Normal	81–90	21
Average	91–110	26
Bright Normal	111–120	2
Superior	121–130	1
Total		75

TABLE CXXII

SHOWING AREAS FROM WHICH IN-PATIENTS CAME

Area	Number
Brisbane and Suburbs	75
Children's Institutions in or near Brisbane	3
Areas outside Brisbane	80
Total	158

The Out-Patients' Department at Wilson Hospital saw 246 patients since the opening date, of whom 174 were male and 72 female.

Children were referred to the hospital from a variety of sources, a large number being referred by the State Children Department and the Children's Court. Private individuals can seek out-patient treatment for their children at Wilson Hospital Child Guidance Clinic if they wish to do so. It will be noted that 67 cases were referred in this manner.

Table CXXIII gives information on referrals and succeeding tables give other relevant information.

TABLE CXXIII

SHOWING MODES OF REFERRAL OF OUT-PATIENTS

Mode	Number
Educational Agencies—schools	15
Health Agencies—general practitioners, &c.	36
Welfare Agencies—State Children Department, Children's Court, Institutions, &c.	117
Private Individuals	67
Police	5
Miscellaneous	6
Total	246

TABLE CXXIV

SHOWING REASONS FOR REFERRAL OF PATIENTS TO OUT-PATIENT CENTRE

Reason	Number	Percentage
Reasons associated with Anti Social Behaviour	92	37·4
Reasons associated with Behaviour Disorders	66	26·8
Reasons associated with Education	22	8·9
Reasons associated with Employment	9	3·7
Reasons associated with Habits	5	2·0
Reasons associated with Mental Deficiency	2	·8
Reasons associated with Organic Brain Disorder	4	1·7
Reasons associated with Personality Disorders	17	6·9
Reasons associated with Psychosomatic Symptoms and Sensory Defects	3	1·2
Reasons associated with Elimination	1	·4
Reasons associated with Sex Disorder	23	9·4
Reasons associated with Sleep	1	·4
Reasons associated with Speech	1	·4
Total	246	100·0

TABLE CXXV

SHOWING DISTRIBUTION OF INTELLIGENCE IN 197 CHILDREN TESTED

Intellectual Classification (Wechsler)	I.Q. Range	Number
Mental Defect	41–70	19
Borderline Mental Defect	71–80	34
Dull Normal	81–90	57
Average	91–100	69
Bright Normal	111–120	14
Superior	121–130	3
Very Superior	130 and above	1
Total		197

TABLE CXXVI

SHOWING STATE OF CHILD'S PARENTS

Natural Parents (lives with own father and mother)	108
Child adopted	6
Child with foster parents	5
Institutions—child lives in Church Home or similar institution	68
Child with mother (father dead)	18
Child with father (mother dead)	0
Child with mother and step father	12
Child with father and step mother	4
Child with mother (father deserted, separated, divorced)	15
Child with father (mother divorced, deserted)	3
Child with relatives	2
Child in Boarding School or Hostel	3
No information	2
Total	246

TABLE CXXVII

SHOWING AREAS FROM WHICH CHILDREN CAME TO WILSON OUT-PATIENTS CENTRE

Area	Number
Brisbane and Suburbs	134
Children's Institutions in or near Brisbane ..	68
Areas outside Brisbane	36
Total	238

Wilson Hospital has now settled down to routine practice. Many of the staff members had to be trained, but due to their enthusiasm and a year's experience they are now quite good at their job. Since the opening of Wilson Hospital no committed school boys have been at Westbrook Farm Home. All have been kept at Wilson Hospital where they attend the special school. Disturbed boys were treated by the staff at Wilson Hospital during the year with many good results. The work of the Chaplains at the hospital is very much appreciated. Through their efforts many jobs and foster homes were found for boys leaving institutional care.

The Hospital has also had very happy relations with Church Homes caring for children such as Boys' Town, the Marsden Boys' Homes, The Salvation Army Boys' Homes and many others, and has to thank many organisations for their interest and help during the year.

CHERMSIDE TREATMENT CENTRE FOR HANDICAPPED CHILDREN

This unit was opened in January 1962, and has a bed capacity of approximately 150 children. All sub-normal babies are admitted here for treatment and assessment. It is proposed to retain these children at the Centre till they reach school age.

There is a kindergarten at the Treatment Centre to which some of the children go for training.

During the year the staff of the Division of Welfare and Guidance has made many examinations and investigations of these children. The parents have also been interviewed in many cases and they have received counselling where this is necessary.

The enthusiasm of the staff at Chermside has made the Centre into a model unit.

CHILDREN'S HOSPITAL—CHILD GUIDANCE CLINIC

The visiting specialists to this clinic are Dr. W. Leggat and Dr. I. Phillips. They treated a large number of children during the year and provided a consultant service to the hospital.

It has recently been proposed to build a model Child Guidance Unit in the grounds of the hospital. This unit will contain out-patient and day hospital facilities as well as a school for maladjusted children and accommodation for in-patients. It will fill a gap in the Child Guidance Services to the State and its opening will be very much appreciated by the Children's Hospital and Child Guidance staff members.

Opening a Child Guidance Unit at the Children's Hospital is in keeping with the policy of integrating child guidance and paediatrics.

CHILD GUIDANCE SERVICES TO INSTITUTIONS

During the year from time to time psychiatrists from the Division have visited Church Homes and similar institutions where children are in residence. Such institutions are the Salvation Army Industrial School for Girls, the Holy Cross Home at Wooloowin, the Home of the Good Shepherd at Mitchelton, the Salvation Army Boys' Homes and others.

The help given these Homes in settling down disturbed children was appreciated and it is hoped to extend these services in the future.

TEACHING ACTIVITIES

A variety of students attended either Mary Street or Wilson Hospital for teaching during the year. Students who attended include those doing Medicine, Psychology, Social Work, Occupational Therapy, Teaching and Nursing. The teachers were from the University, Kindergarten College, Remedial Education Centre and Sub-Normal Children's Welfare Association School. The Nurses were from the Maternal and Child Welfare Department and the School Health Service.

Lectures were given during the year to the State Children Department staff and the personnel of Children's Homes, to groups doing post-graduate examinations and to various groups in the community both lay and professional.

The work done during the year involved many interviews and examinations by staff members. Table CXXVIII shows the extent of this work.

TABLE CXXVIII

SHOWING NUMBER OF INTERVIEWS BY THE PROFESSIONAL STAFF

Psychiatrists—Total Interviews	4,865
Psychologists—Total Interviews	1,810
Total Number of Group Play Treatments ..	1,460
Social Workers—Total Interviews	2,255
Medical Consultants—Total Interviews ..	330
Speech Therapists—Total Interviews (individual and group)	2,040
Grand Total Interviews	12,760

The year 1961-62 has seen the fruition of many of the plans for a comprehensive Child Guidance Service. There is now an Out-patient Centre at Mary Street, a Hospital for treating delinquent youth at Windsor and a Centre for treating sub-normal children at Chermside.

Plans are being made to erect a unit at the Children's Hospital containing facilities for both in-patients, a day hospital and out-patients. This will be useful for training both student doctors and student nurses. It is hoped to equip the family doctor with a knowledge of child guidance principles. Plans are also being considered for establishing Child Guidance Clinics in country areas.

In the space of three years the basis of a comprehensive Child Guidance Service has been laid. The accommodation provided has been of high standard with all the necessary facilities. The staff has good conditions of work. The future will probably be a gradual extension to country centres as the State increases its population.

DIVISION OF LABORATORY SERVICES

LABORATORY OF MICROBIOLOGY AND PATHOLOGY

Director: J. I. Tonge, M.B., B.S. (Syd.), D.C.P. (Syd.), M.C.P.A.

Deputy Director: M. J. J. O'Reilly, M.B., B.S. (Syd.), M.C.P.A.

Pathologist: A. Davison, M.B., B.S. (Qld.), M.C.P.A.

Technical Supervisor: D. J. W. Smith, M.Sc. (Melb.).

1. STAFF AND DEVELOPMENT

During the year over 268,000 tests have been performed, an increase of 9,000 over the total for the previous year. This increase has occurred mainly in the Tuberculosis, Histopathology and Biochemistry sections.

The erection of the Health and Welfare building has been commenced and it should be ready for occupation within eighteen months. This should relieve the present overcrowding of the laboratory, provide excellent working conditions and allow for expansion and development. Plans have been completed for the new Animal House at the Normanby and building is expected to commence within a few months.

In anticipation of the increased volume of work which will result from the compulsory X-ray survey in the city an additional air conditioned laboratory and inoculation room have been provided for the Tuberculosis Unit. Accommodation for infected animals is a constant problem and this cannot be increased in the present building. The tuberculosis laboratory now acts as a reference centre for the State and many cultures and specimens are referred from peripheral centres for typing and sensitivity tests. An additional 9,500 tests have been carried out by this section during the year.

The Institute of Forensic Pathology has now been functioning for eighteen months and in the past year 794 coronial autopsies were performed, an increase of 125 over the total for the previous twelve months. The laboratory in the building facilitates the investigation of many of the difficult autopsies and makes for greater accuracy in interpretation. The mobile X-ray has proved invaluable on several occasions. The design of the building is most satisfactory both for routine work and teaching, and the facilities for the police and public have been much appreciated. During the year numerous visitors both from interstate and overseas have visited the Institute and they regard it as one of the most functional and well equipped buildings of its type.

The laboratory is the W.H.O. Leptospiral Reference Centre for Australasia. Both cultures and antisera have been distributed on request to interstate and overseas laboratories. Technical information has been made available and training has been given to laboratory personnel in techniques for the diagnosis of leptospirosis. A grant of 500 dollars was received from the World Health Organisation and this money will be spent on the purchase of freeze drying equipment.

Collaboration with the Queensland Institute of Medical Research has continued and a bacteriologist has been seconded to assist in a leptospiral survey at Mossman in North Queensland, to commence early in July. The staff has also assisted in surveys of wound infection in two metropolitan hospitals, in Q fever studies, in a Traffic Injury Research project and in research work being carried out by the various departments of the Queensland University.

The surveys of wound infection at the Princess Alexandra and Brisbane General Hospitals have been organised by a nursing sister seconded from the School Health Service. The laboratory is responsible for the bacteriology connected with this study. The excellent co-operation of the medical and nursing staff in the two hospitals is much appreciated and has made the survey possible.

The Director is the Queensland Representative of the Traffic Injury Research Committee of the National Health and Medical Research Council. A meeting of this subcommittee was held in Brisbane in April to study the project at present in progress in Brisbane. The medical officers of the laboratory are actively participating in this research into traffic injuries and already much valuable data has been collected.

A subcommittee of the National Tuberculosis Advisory Committee, of which the Director is a member, met in Canberra in May to consider the standardisation of techniques for the laboratory diagnoses of tuberculosis and the sensitivity testing of mycobacteria. Considerable progress has been made and the recommendations have already been circulated.

The medical staff have continued to act as part-time lecturers in Forensic Medicine and conduct regular lecture demonstrations for fifth year Medical students. A series of lectures is given for the Australasian Institute of Laboratory technology and one of the bacteriologists acts as a demonstrator for the Parisitology course at the Medical School.

Three papers were delivered by the medical staff at the Refresher Course for Chest Physicians held in Brisbane in November, 1961. The subjects of the papers included the cytological diagnosis of carcinoma of the lung, the atypical mycobacteria and the histopathology and bacteriology of resected lung tissue.

Owing to the steady expansion of the laboratory and the increased volume of work the maintenance of adequate records, the handling of specimens and the prompt forwarding of reports are pressing problems. The situation is rendered more difficult by the shortage of space and limited staff. Some improvements have been made by the decentralisation of the records to the various sections of the main laboratory. Expert advice is being sought in an endeavour to find ways of saving time and labour and to increase the efficiency of the office and record system.

During the year the laboratory participated in two evaluation surveys in biochemistry conducted by the College of Pathologists of Australia and in surveys for both biochemistry and bacteriology by the American College of Pathology. In each case the results obtained by the laboratory were most satisfactory.

2. STATISTICAL SUMMARY

TABLE CXXIX

1. Bacteriology

A. Specimens of Human Origin (Non-Tuberculous)

Specimen	Examination			Totals
	Culture	Microscopy	Antibiotic Sensitivity	
Swabs—				
Throat and Nose	226	84	89	399
Urethra, Cervix, Anus, Bartholin's Glands	399	3,208	33	3,640
Ear	55	14	36	105
Eye	31	7	16	54
Other	17	2	10	29
Pus	308	55	264	627
Pleural Fluid	28	19	3	50
Cerebrospinal Fluid	56	130	..	186
Serous Exudate	..	1,043	..	1,043
Sputum	292	111	131	534
Blood	45	..	2	47
Urine	1,410	2,506	505	4,421
Faeces	474	100	7	581
Post Mortem Swabs and Tissues	9	1	2	12
Miscellaneous	19	13	4	36
Total 1961–62	3,369	7,293	1,102	11,764
Total 1960–61				9,822

B. Tuberculosis Section

Specimen	Examination			Totals
	Culture	Microscopy	Animal Inoculation	
Sputum	12,726	12,726	200	25,652
Gastric Aspiration	2,234	..	944	3,178
Laryngeal Swab	44	..	..	44
Urine	659	..	295	954
Pus	44	45	42	131
Pleural Fluid	87	87	81	255
Cerebrospinal Fluid	23	23	23	69
Miscellaneous Fluid	14	14	12	40
Bronchial Washing	12	12	1	25
Laryngeal and Tracheal Washing	56	56	1	113
Lung Tissue	50	50	26	126
Cultures	4	25	45	74
Tissue	15	15	15	45
Miscellaneous	27	35	23	85
Total	15,995	13,088	1,708	30,791
Culture — Identification (atypical strains)				127
Culture — Sensitivity test (Streptomycin, P.A.S., I.N.A.H.)				252
Culture — Sensitivity test (Viomycin, Pyrazinamide, Cycloserine and Ethionamid)				127
Total 1961–62				31,297
Total 1960–61				21,789

C. Foods and Waters

Specimen	Examination			Totals
	Culture	Plate Count	Reductase	
Water	369	362	..	731
Milk	669	669	664	2,002
Cream	30	29	29	88
Other Milk Products	43	19	..	62
Meats and Fish	13	3	(3 precipitation tests)	19
Coconut	182	..	..	182
Miscellaneous	46	8	..	54
Total 1961–62	1,352	1,090	696	3,138
Total 1960–61				3,191

TABLE CXXIX—*continued*

D. Various Materials

Specimen	Object of Examination	Number
Disinfectants and Antiseptics	Rideal-Walker Co-efficient	54
Bottles	Sterility	88
Catgut	Sterility	17
Dental Burrs	Sterility	26
Miscellaneous	Sterility	47
Bacterial Cultures	Identification	4
Water Deposit	Iron Bacteria	5
Skin and Nail Scrapings	Culture	43
	Direct Smear	34
	Antibiotic Sensitivity Test	5
	Total 1961–62	323
	Total 1960–61	473

2. PHAGE TYPING

——	Number
Cultures Prepared	2,886
Coagulase Tests	2,099
Antibiotic Sensitivity Tests	844
Phage Typing of Staphylococci	2,099
Total 1961–62	7,928
Total 1960–61	7,045

3. SEROLOGY

——	Number
Serum Agglutination (Screen)—	
Salmonella typhosa (O)	3
Salmonella typhosa (H)	4,686
Salmonella paratyphi (H)	4,686
Salmonella schottmülleri	4,686
Proteus OX19	4,679
Proteus OXK	4,679
Proteus OX2	2
Brucella abortus	4,679
Leptospira icterohaemorrhagiae	5,187
Leptospira canicola	5,187
Leptospira australis	5,187
Leptospira robinsoni	5,187
Leptospira zanoni	5,187
Leptospira esposito	5,187
Leptospira pomona	5,187
Leptospira grippotyphosa	5,187
Leptospira medanensis	5,187
Leptospira kremastos	5,187
Leptospira mini	5,187
Leptospira hyos	5,187
Leptospira celledoni	5,187
Leptospira autumnalis	5,187
Leptospira broomi	5,187
Leptospira sarmin	218
Leptospira javanica	218
Leptospira schuffneri	218
Leptospira benjamin	218
Leptospira jonsis	218
Leptospira sumneri	218
Leptospira malaya	218
Leptospira ballum	218
Leptospira pyrogenes	218
Leptospira cynopteri	218
Leptospira sentot	218
Leptospira bankinang	356
Leptospira djasiman	218
Leptospira wolfii	218
Leptospira hardjo	218
Leptospira bataviae	356
Leptospira semeranga	218
Leptospira andamana	218
Leptospira sejro	138
Coxiella burneti	70
Streptococcus MG	10
Cold Agglutinins	10
Serum Agglutination Tests (Quantitative)	2,549
Whey Agglutination Test—	
Coxiella burneti	1
Coxiella burneti capillary	1
Paul Bunnell Tests	3,551
Leptospiral Strains Typed (18) Agglutination Tests Performed in Typing	500
Carried forward	116,935

——	Number
Brought forward	116,935
Complement Fixation Tests—	
Coxiella burneti (Phase I)—	
Routine	73
Quantitative	16
Coxiella burneti (Phase II)—	
Routine	6,455
Quantitative	618
Typhus Fever Murine (Soluble)—	
Routine	72
Quantitative	8
Typhus Fever Murine (Washed Rickettsiae)—	
Routine	3
Quantitative	1
Typhus Fever Epidemic (Washed Rickettsiae)—	
Routine	3
Mumps Antigen—	
Routine	62
Quantitative	28
Influenza A Antigen—	
Routine	7
Quantitative	5
Influenza B Antigen—	
Routine	7
Quantitative	2
Psittacosis (E.A.E. Virus)—	
Routine	6,603
Quantitative	501
Rickettsia akari—	
Routine	1
Kolmer Wasserman (Serum)—	
Routine	9,543
Quantitative	41
Complement Fixation Tests—	
Reiter Protein	494
Kolmer Wasserman (C.S.F.)	495
Reiter Protein (C.S.F.)	11
V.D.R.L.	9,543
Total 1961–62	151,527
Total 1960–61	153,275

TABLE CXXIX—*continued*

4. BIOCHEMISTRY

Specimen	Examined For	Number
Whole Blood	Urea	1,138
	Glucose	166
	Uric Acid	688
	Chloride	1
	Pigments	32
	Bromide	1
Plasma	Protein	1
	Fibrinogen	5
Serum	Protein	1,671
	Cholesterol	398
	Bilirubin	1,152
	Chloride	100
	Calcium	128
	Inorganic phosphate	77
	Acid phosphatase	77
	Alkaline phosphatase	1,088
	Thymol turbidity	1,008
	Thymol flocculation	1,006
	Zinc sulphate turbidity	1,007
	Paper electrophoresis	1,243
	Amylase	21
	Cholinesterase	35
	Sodium	148
	Potassium	174
	Transaminase	62
	Fibrinogen	1
	CO_2 Combining power	23
	Bence Jones Protein	3
	Iron	1
Cerebrospinal Fluid	Protein	133
	Globulin	118
	Chloride	119
	Glucose	120
	Urea	1
	Sodium	1
	Potassium	1
	Acetone	1
	Colloidal Gold Reaction	1,077
Pleural Fluid	Protein	1
Aspirated Fluid	Protein	1
Urine	Albumin	2,510
	Sugar	2,518
	Pigments	2
	Bilirubin	9
	Urobilin	5
	Urobilinogen	11
	Diastase	4
	Calcium	2
	Bence Jones Protein	2
	Sodium	1
	Potassium	2
	Chloride	2
	Coproporphyrins	45
	Acetone	4
	Porphyrins	1
	Aceto-acetic acid	3
	Phenylketonuria	1
Faeces	Total, Split and Unsplit Fats	65
	Occult blood	35
	Creatorrhoea	2
	Trypsin	3
Renal Calculi	Chemical constitution	45
Functional Tests	Glucose tolerance tests	202
	Urea clearance tests	36
	Urea concentration tests	36
	Fractional test meals	53
	Insulin test meal	1
	Histamine test meals	10
	Total 1961–62	18,638
	Total 1960–61	12,373

TABLE CXXIX—*continued*

5. HAEMATOLOGY

—	Number
Cell Counts—	
Red Cells (Total)	227
Red Cells (Stippled)	143
Reticulocytes	47
White Cells (Total)	3,676
White Cells (Differential)	4,606
Platelet Count	95
Haemoglobin	10,520
Haematocrit	7,412
Sedimentation Rate	1,254
Coagulation Time	93
Bleeding Time	90
Prothrombin Time	392
Red Cell Fragility	9
Le Cells	45
Latex Slide Test	78
Blood Grouping (A.B.O.)	3,536
Blood Grouping (Rh)	3,536
Blood Grouping (M and N)	6
Rh Antibodies	1,321
Total 1961–62	37,086
Total 1960–61	35,523

6. PARASITOLOGY

Specimen	Object of Examination	Number
Faeces	Amoebae (Cysts and Vegetative)	82
	Helminth ova	302
Pus	*Trichomonas vaginalis*	7
Blood	*Plasmodium sps.*	19
	Microfilariae	3
Helminth	Identification	12
	Total 1961–62	425
	Total 1960–61	892

7. VARIOUS TESTS

—	Number
Male Toad Test (Pregnancy)	2,019
Male Toad Test (Pregnancy) (Quantitative)	29
"Cat-Scratch" Skin Test	2
Casoni Skin Test	2
Seminal Fluid Assessment	16
Virulence Test for Corynebacterium Diphtheriae	2
Total 1961–62	2,070
Total 1960–61	2,122

8. HISTOLOGY

Tissue Sections Prepared	Number
Human—	
Biopsy (specimens received 8,298)	10,168
Medico-Legal Tissues	171
Animal Tissues	32
Total 1961–62	10,371
(Post-mortem tissue listed under Institute of Forensic Pathology)	
Total 1960–61 (Includes Post-mortem and biopsy)	11,288

TABLE CXXIX—*continued*

9. EXFOLIATIVE CYTOLOGY

Specimen	Number
Sputum	1,634
Bronchial or Tracheal Washing	156
Pleural Fluid	48
Miscellaneous	26
Total 1961–62	1,864
Total 1960–61	1,799

10. MEDICO-LEGAL

Specimen	Object of Examination	Number
Clothing and Various Articles	Blood	257
	Spermatozoa	207
Vaginal Smears	Spermatozoa	114
Tissue	Histopathology	171
Blood	Grouping	11
Scrapings	Presence of Blood	3
	Determination of Blood Group of Stains	2
Hair	Indentification	30
Skeleton	Indentification	1
Bones	Indentification	32
Bullet	Evidence of Human Tissue	1
Bloodstains	Determination of Blood Group	28
	Total 1961–62	857
	Total 1960–61	610

11. POST-MORTEM

—	Number
Post-Mortem Examinations—	
Total 1961–62	794
Total 1960–61	669

12. ATTENDANCES AT COURT

—	Number
Supreme Court	35
Police Court	52
Coroner's Court	16
Other Courts	22
	125

13. INSTITUTE OF FORENSIC PATHOLOGY

HISTOLOGY

Specimen	Examination	Number
Tissue	Post Mortem	2,773
	Frozen Sections	21
	Special Stains	16
		2,810

HAEMATOLOGY

Specimen	Examination	Number
Blood	Blood Grouping (A.B.O.)	4

TABLE CXXIX—*continued*

BIOCHEMISTRY

Specimen	Examination	Number
Whole Blood	Urea	1
	Glucose	132
	Pigments	1
Serum	Protein (including Specific Gravity)	37
	Bilirubin	1
	Chloride	36
	Alkaline phosphatase	1
	Thymol turbidity	1
	Zinc Sulphate turbidity	1
Cerebrospinal Fluid	Urea	26
	Glucose	143
	Glutamine	32
	Creatinine	1
Urine	Albumin	1
	Sugar	34
	Bilirubin	1
	Urobilin	2
	Urobilinogen	2
	Acetone	8
	Aceto acetic acid	8
	Salicylates	2
		475

BACTERIOLOGY

Specimen	Examination	Number
Swabs—		
Lung	Culture	28
Bronchial	Culture	13
Bowel	Culture	10
		51
Faeces	Culture	3
Urine	Culture	2
Pus	Culture	17
	Direct Smear	13
Blood	Culture	15
Parasites	Microsopic	1
Diatoms	Examination for	22
		124

14. MATERIAL SUPPLIED

To hospitals, private practitioners and local authorities	
Diagnostic kits for tuberculosis	5,241
Diagnostic kits for bacteriology	776
Diagnostic kits for haematology and serology	4,533
Diagnostic kits for biochemistry	147
Diagnostic kits for cytology	1,555
Media (single units)	48
Total 1961–62	12,300
Total 1960–61	7,815

15. MEDIA

Slopes	71,550
Plates	7,851
Tubes and bottles	23,922
Total	103,323
	Litres
Bulk Media—	
Agars	110·5
Broths, &c.	98·3
Chemical Solutions	843·2
Stains	171·7
Total	1,223·7

3. Q FEVER

(*a*) Incidence: geographic and occupational

During the period 1st July, 1961, to 30th June, 1962, 216 recent infections with Q fever were diagnosed in Queensland, 12 from New South Wales and 7 from South Australia. Indication of probable recent infection was either a complement fixation titre for *Coxiella burneti* of 1 : 64 or greater in a single serum or a significant (fourfold) rise in titre in paired sera. The geographical distribution of these cases is set out in Table CXXX.

From the limited number of sera submitted from New South Wales there is again evidence of a wide distribution of Q fever in that State. In addition to the cases mentioned above two abattoir workers from Newcastle and a shearer from Broken Hill each had a titre of 1 : 32 in single serum samples. In a survey of 96 sera from abattoir workers in Adelaide, 35 had evidence of Q fever antibodies and in six of these the titres were 1 : 64 or greater.

The occupational distribution of the Q fever patients is set out in Table CXXXI. This year 53 per cent. of the patients were associated with the meat industry, 13 per cent. with dairying and 13 per cent. with the sheep industry.

(*b*) Two fatal cases of Q Fever

Two deaths attributable in part to Q fever occurred at the Princess Alexandra Hospital during the year. In one, an abattoir worker aged 51 years, an endocarditis due to *C. burneti* was superimposed on a calcified aortic stenosis. In this case the organism was recovered at post-mortem from the spleen and vegetative aortic valve.

The second case was an abattoir worker aged 48 years. There was a long history of alcoholism. Death was due to portal cirrhosis with a superimposed acute Q fever infection. *C. burneti* was isolated at post-mortem from the spleen and kidney.

The serological investigation of these cases was carried out in this laboratory and the isolations of the rickettsiae at the Queensland Institute of Medical Research.

(*c*) Phase I Antibody

Studies into the incidence and significance of Phase I complement-fixing antibody have continued and a report has been prepared for publication in association with Dr. O. W. Powell. Complement-fixation tests for Phase I antibody are performed on all cases suspected of chronic infection with Q fever as a routine.

(*d*) Luoto Capillary agglutination test

The Luoto capillary agglutination test using a stained *C. burneti* antigen is being run in parallel with the complement-fixation test on most human sera submitted. It is intended to assess the value of the former test as a routine diagnostic procedure. The comparative trial is still in progress.

TABLE CXXX

GEOGRAPHICAL DISTRIBUTION OF Q FEVER CASES DIAGNOSED IN THE LABORATORY (1ST JULY, 1961—30TH JUNE, 1962)

QUEENSLAND	
Metropolitan District	78
Moreton District	37
Maryborough District	18
Downs District	20
Cairns District	7
Townsville District	5
Mackay District	4
Rockhampton District	8
Far West District	1
Central West District	18
South West District	7
Roma District	13
Total	216
NEW SOUTH WALES	
Northern Rivers District	6
Tenterfield District	1
Broken Hill District	3
Newcastle District	1
Taree	1
Total	12
SOUTH AUSTRALIA	
Adelaide	7

TABLE CXXXI

OCCUPATIONAL DISTRIBUTION OF Q FEVER CASES DIAGNOSED IN THE LABORATORY (1ST JULY, 1961—30TH JUNE, 1962)

QUEENSLAND	
Meat Industry—	
Abattoir workers	104
Occupations associated with abattoirs	8
Cattle station workers	4
Total	116
Sheep Industry—	
Shearers	24
Station hands	10
Graziers	5
Total	39
Dairying Industry—	
Dairy farmers	25
Mixed farmers	8
Wife and children on farms	5
Milk grader	1
Total	39
Other Occupations—	
Hide handlers	4
Timber workers	3
Kangaroo shooter	1
Cane cutter	1
Sugar mill hand	1
Painter	1
Shop assistant	1
Child	1
Unstated	9
Total	22
NEW SOUTH WALES	
Dairy farmers	4
Abattoir workers	3
Sheep station hand	3
Hide handler	1
Unstated	1
Total	12
SOUTH AUSTRALIA	
Abattoir workers	7
Total	7

TABLE CXXXII

CLASSIFICATION OF PROBABLE LEPTOSPIRES CAUSING INFECTION

Classification of Leptospires	Number
Coastal area of Queensland, North of Rockhampton—	
canicola serogroup	6
L. zanoni	14
L. robinsoni	3
australis serogroup	32
L. pomona	18
L. grippotyphosa	4
hebdomadis serogroup	6
L. hyos	8
L. celledoni	4
Indeterminate (mixed infections)	8
Total	103
Coastal area of Queensland, Rockhampton to N.S.W. border—	
L. icterohaemorrhagiae	2
L. pomona	116
L. hyos	14
L. pomona and *L. hyos*	1
L. grippotyphosa?	1
hebdomadis serogroup ?	1
Total	135
Darling Downs and Western Queensland—	
L. pomona	20
L. hyos	9
Total	29
New South Wales (Northern Rivers, Tenterfield and Newcastle)—	
L. pomona	41
L. hyos	4
L. grippotyphosa ?	3
L. pomona and *L. hyos*	3
South Australia—	
L. pomoua	2
Papua and New Guinea—	
pyrogenes serogroup	1
hebdomadis serogroup	1
Total	55

4. LEPTOSPIROSIS

(*a*) Incidence and geographical distribution

All sera submitted from patients with pyrexias of unknown origin were tested with the agglutination test using fifteen serotypes. During the period 1st July, 1961, to 30th June, 1962, titres indicative of recent leptospiral infections in single sera or significant rises in titre in paired sera were found in 322 patients. Of these 267 occurred in Queensland, 51 from New South Wales, 2 from South Australia and 2 from the Territory of Papua and New Guinea. The geographical distribution of these cases and the probable causative serotypes are set out in Table CXXXII. Since only a limited number of sera are referred to the laboratory from interstate or overseas the number of infections diagnosed in no way indicates the true incidence of leptospirosis in these areas.

(*b*) Leptospirosis in South Australia

At the request of the Director of the Institute of Medical and Veterinary Science, Adelaide, a survey of sera from abattoir workers in that city was carried out in March 1962 for evidence of leptospiral antibodies.

Ninety-eight sera were examined and of these 25 had titres of 1 : 100 or greater (*L. pomona* 23, and *L pomona* + *L. hyos,* 2). In 9 of those with leptospiral antibodies there were al o antibodies for *C. burneti.* These abattoir workers were said to have been handling pigs at all stages from arrival to slaughter.

Sera from 40 pigs and 34 bovines from the Flaxley, Tailem Bend, Inwood, Taplin, Echunga and Macclesfield areas in South Australia were also examined. In the 40 pig sera, antibodies in a titre of 1 : 100 or greater were found for *L. pomona* in 2, *L. hyos* in 4 and *L. pomona* + *hyos* in 2. In the 34 bovine sera, antibodies in a titre of 1 : 100 or greater were found for *L. pomona* in 3 and *L. hyos* in 1.

This limited survey provides ample evidence for the presence of leptospirosis in South Australia and the incidence is probably much the same as that in Southern Queensland both in man and animals.

(*c*) Survey of animal reservoirs in North Queensland

The study of animal reservoirs in North Queensland has continued in conjunction with the staff of the Field Station of the Queensland Institute of Medical Re earch. Sera from 498 wild animals and 13 experimental animals have been examined for leptospiral antibodies.

The following cultures of leptospires were isolated from wild animals, either direct from kidney culture or after passage through laboratory mice. and these were subsequently typed.

Species of animal	Serotype identified
Isoodon macrourus .	1 *L. zanoni*
Rattus conatus . .	1 *L. zanoni*
Rattus conatus .	6 *L. australis*
Rattus assimilis . .	2 *L. australis*
Rattus assimilis . .	1 *L. zanoni*

No new host-serotype records were found.

(*d*) Identification of cultures from human sources

During the year 7 cultures from human infections were submitted. These were identified as *L. australis,* 4, *L. zanoni,* 2, and *L. pomona,* 1.

(*e*) Infections due to *L. grippotyphosa* and the *hebdomadis* serogroup in Southern Queensland and New South Wales

One patient in southern Queensland and three from northern New South Wales provided serological evidence of leptospiral infections with *L. grippotyphosa* or an allied serotype. One patient, an unemployed youth living in a Brisbane suburb had been swimming in a creek at Woodbridge one week prior to his illness. Antibodies to a titre of 1 : 10,000 for *L. grippotyphosa* were found in his serum. He had never visited the northern part of Queensland, the only area in Australia from which this serotype has previously been isolated.

Another youth employed on a dairy and banana-growing property at Main Arm, N.S.W., developed antibodies to *L. grippotyphosa* (1 : 300) during the course of a febrile illness. No antibodies to other leptospiral serotypes were detected. The other two patients, from Mullumbimby and Tenterfield re pectively, in N.S.W., had titres of 1 : 100 and 1 : 300 for *L. grippotyphosa.*

A meatworker at Ipswich, Queensland, developed antibodies (1 : 300) to the *hebdomadis* serogroup of leptospires during a febrile illness. At the time cattle from surrounding districts and also from northern areas of Queensland were being slaughtered at his place of employment. An attempt to isolate leptospires from his urine during convalescence was unsuccessful. It is of interest to note that in 1960 two brothers working on a dairy property at Clumber, Queensland, a neighbouring district, produced a similar serological picture during the course of an illness contracted in January of that year.

(*f*) **Leptospira robinsoni,** a new serotype of the **pyrogenes** serogroup

The leptospiral strain "Robinson" was originally isolated in July, 1951, from a sick canefield worker in North Queensland at the Field Station of the Queensland Institute of Medical Research. It was found to have close serological affinities with *L. zanoni* on the basis of cross-agglutination reactions. Antigenic differences, however, between the two strains were also apparent in these tests. Furthermore the patient's serum reacted in high titre against the homologous isolate but failed to agglutinate *L. zanoni* antigen.

A serological study of this and five additional antigenically similar isolates has been carried out both here and at the WHO/FAO Leptospirosis Reference Laboratory, Washington, D.C. As a result of this combined study, using cross-agglutination and agglutination-adsorption technique the Robinson strain is now classified as a new serotype member of the *pyrogenes* serogroup and officially designated *L. robinsoni.* A report of this work has already been published.

The frequence of *L. robinsoni* infection in human leptospirosis is relatively low when compared with that of *L. australis* and *L. zanoni.* In view of the close serological affinity, however, of *L. zanoni* and *L. robinsoni* it is quite likely that infections with the latter serotype could be incorrectly attributed to *L. zanoni.* The two infections cannot be differentiated clinically and both are potentially icterogenic in man.

(*g*) Serological Survey from Southern India

A serological survey for the presence of leptospiral antibodies in sera submitted from the Christian Medical College at Vellore, Southern India was commenced last year and a further 150 sera have been tested. Antibodies were found in 8 of these sera and were for the following serotypes: *L. hardjo* 2, *L. djasiman* 2, *L. djasiman* and *L. hardjo* 1, *L. espotito* 1, *L. hyos* 1, and *L. pomona, L. esposito, L. grippotyphosa, L. djasiman* and *L. bankinang* 1. This survey has temporarily been discontinued.

5. A SEROLOGICAL SURVEY FOR ANTIBODIES TO THE ORNITHOSIS-LYMPHOGRANULOMA VENEREUM GROUP OF VIRUSES IN QUEENSLAND

A survey for complement-fixing antibodies to the ornithosis-lymphogranuloma venereum group of viruses was commenced in January, 1959, and since then all sera submitted from patients with pyrexias of unknown origin have been tested. During the three-year period 1959–61, a total of 9,434 patients have been studied and two or more specimens of sera examined from 2,855 of them. In order to determine the incidence of antibody to the ornithosis group of viruses in the normal population a group of 1,990 healthy blood donors was examined. In addition a survey of 200 workers in the poultry industry was made in 1962 and 62 patients with non-specific urethritis were also examined. The antigen used in these tests was the Ornithosis-Lymphogranuloma Venereum (O-LGV) complement-fixing antigen prepared by the Commonwealth Serum Laboratories.

Antibodies were detected in 74 (3·7 per cent.) of the 1,990 healthy blood donors and the distribution of antibody titres ranged from 1:8 to 1:64.

In the 9,430 patients with pyrexias, antibodies were obtained in 474 (5 per cent.) in a titre of 8 or greater. A serological diagnosis other than ornithosis was made in 102 of these patients. The remaining 371 patients were studied with reference to three factors, namely avian contact, the presence of O-LGV antibodies and the presence of clinical and radiological evidence of pulmonary involvement in some form. Antibody titres in some were low but many had been treated with tetracyclines which are known to suppress or delay the appearance of antibodies.

In the sera collected from 200 persons associated with the poultry industry, 35 (17·5 per cent.) of the workers had antibodies to the O-LGV antigen. The length of time these individuals had been associated with the industry ranged from

6 weeks to many years. Several newcomers to the industry had a history of a recent "influenza like" illness. The incidence of antibodies in this group of workers is significantly greater than in the normal population. The transitory nature of the infections reported by those with a history of recent exposure and illness is in accord with the observation that strains of ornithosis virus from domestic fowls produce only mild infections in man.

Sixty-two sera were examined from patients who attended the Male Venereal Clinic for urinary tract infections. These patients were classified as having non-specific urethritis, gonococcal and syphilitic infections having been excluded. Twenty of them (32·3 per cent.) had antibodies to the O-LGV antigen. The difference in the incidence of antibodies between this group of patients and the normal population is highly significant and points to the probable aetiology of the infections.

Trachoma was once a serious disease in Western Queensland but it is of minor consequence today. Relatively few of the sera tested came from the area in which this disease was endemic and it may be dismissed as a factor of any significance in the present investigation. Lymphogranuloma venereum may also be excluded in the absence of clinical evidence of its presence.

The serological findings from the routine use of Ornithosis-Lymphogranuloma venereum group antigen over the three-year period emphasises the limitations of such an antigen as a diagnostic reagent. The widespread occurrence of low titre antibodies in the general population, and the frequency with which anamnestic responses occur in unrelated infections render the interpretation of the tests most difficult. Significant rises in titres of antibody acquire significance only when tests for other infections are negative. It is thus important that the widest possible screen should be used to exclude these infections.

Interpretation of the complement-fixation results would be aided by examining a number of sera from each patient collected over a period of several months instead of relying on paired acute and convalescent sera or on a single serum sample. Final interpretation of the significance of these serological results depends on a careful clinical assessment of a case and a complete and accurate knowledge of antibiotic treatment and the patient's avian contacts.

A report of this work has been prepared for publication.

6. MURINE TYPHUS

During the year sera from 17 patients with pyrexias of unknown origin were found to have antibody titres for *Proteus OX*19 of 1:128 or greater. In only six of these were confirmatory titres obtained in the complement-fixation test with *Rickettsia mooseri*. The distribution of these cases is as follows: Atherton 4, Brisbane 3, Cairns 2 and one each from Proserpine, Goomeri, Townsville, Dalby, Toowoomba, Charleville and Lismore. One further patient acquired his infection in Malaya and became ill soon after his return to Brisbane. In this case confirmation of the diagnosis of murine typhus was obtained by the demonstration of rising complement-fixation titres with both the group specific and washed type specific *R. mooseri* antigens.

It is probable that most of these patients were in fact suffering from murine typhus. The failure to obtain complement-fixation titres with *R. mooseri* may have been due to the sera having been collected too early in the disease. The complement-fixing antibodies tend to appear after the *Proteus OX*19 agglutination antibodies. Early and intensive antibiotic therapy may have retarded or prevented completely the appearance of the complement-fixing antibodies. Some of these cases could have been Queensland tick typhus, but this could not be confirmed as no antigen for *R. australis* is at present available in the laboratory.

BRUCELLOSIS

Sera from 14 patients were found to have antibodies for *Brucella abortus* in titres of 1:128 or greater. The geographical distribution of these is as follows: Brisbane 4, Atherton 2, Charleville 2, Lismore 2, and one each from Bundaberg, Southport, Beaudesert and Ipswich. In each case there was an occupational association with dairying or the meat industry.

SCRUB TYPHUS

One case of scrub typhus acceptable on serological criteria was diagnosed. The patient was an engineer working on a tin mine at Mt. Spec in North Queensland. His serum had antibodies for *Proteus OXK* in a titre of 1:256.

TYPHOID FEVER

One patient from Port Moresby was diagnosed serologically as having Typhoid fever during the year.

7. MUMPS AND INFLUENZA COMPLEMENT-FIXATION TESTS

Complement-fixation tests for Influenza and Mumps are now performed on request or where the history is suggestive, on sera submitted from cases of pyrexias of undetermined origin. An outbreak of mumps at Longreach was investigated in 1961 and a case of encephalitis in a female of 39 was found to be due to this disease. As yet no opportunity has arisen for the extensive use of the influenza complement-fixation test.

8. INCLUSION BLENORRHOEA

Inclusion blenorrhoea in a male aged 64 was diagnosed in Brisbane in June, 1962. Inclusion bodies were seen in the conjunctival swab and a complement-fixation titre of 1:16 was obtained in the serum for antibodies to the O-LGV antigen.

Stored serum from another case of inclusion blenorrhoea was examined and found to have a titre of 1:65 for O-LGV antibodies. The patient, a male aged 18, developed a urethral discharge in January, 1960. After penicillin therapy the discharge improved but subsequently recurred. In February, 1960, he was seen by Dr. Doherty and was found to have marked bilateral conjunctivitis. Inclusion bodies were found in conjunctival smears but attempts to isolate the virus were unsuccessful.

9. BACTERIOLOGY

(*a*) Diphtheria

A case of diphtheria was diagnosed from Ipswich in August, 1961. Eight contacts from a case diagnosed in the Redlands Shire in February, 1962, were investigated and found to be carrying virulent *C. diphtheriae*.

(*b*) Investigation of diarrhoea in children in Port Moresby

At the request of Dr. Ryan of Port Moresby, rectal swabs were examined from 121 native children with gastro-enteritis. *Shigella flexneri* was isolated from 2 and pathogenic coliforms from 4. No other pathogenic organisms were recovered.

(*c*) Examination of Coconut for Salmonella

In July and August 1961, 98 samples of coconut obtained from distributors in Brisbane were examined for pahtogenic organisms. *Salmonella senftenberg* was isolated from five of these samples.

(*d*) Wound Infection Survey

The clinical aspect of this survey was carried out by Sister S. Hillard, seconded for the purpose from the School Health Service. The laboratory was responsible for the bacteriological investigations. The wholehearted co-operation of the Superintendent, medical and nursing staff in the two hospitals concerned made the surveys possible.

(i) *Princess Alexandra Hospital*

The surgical wound infection survey commenced in October, 1960, and was continued until the end of August, 1961. During November and December, 1961, a more intensive survey was made of gastrectomy and cholecystectomy operations, all medical and nursing staff as well as the patients being checked for possible sources of infection.

During these surveys operations were classified as "clean" or "potentially infected". Wounds were grouped into three classes according to whether they were absolutely clean post-operatively (Group I.), mildly infected (Group II.), or discharging pus (Group III.). Wounds were inspected during the post-operative stay in the ward and at a special follow-up clinic after discharge from hospitals. The results of the main survey at Princess Alexandra Hospital are shown in Table CXXXIII. During the survey a representative cross-section of both elective and immediate surgery in two general surgical wards was investigated. It can be seen that a satisfactory reduction in the wound infection rate in clean operations was maintained during the last five months of the survey. This reduction was due to several factors. First and foremost was the awareness of the staff that a problem existed together with the introduction of new dressing techniques, the provision of an isolation ward and the enthusiastic efforts of the surgical supervisor and the hospital personnel.

TABLE CXXXIII

SURVEY OF WOUND INFECTION AT PRINCESS ALEXANDRA HOSPITAL (October, 1960–August, 1961)

Public Wards

Month	A[1] Number of Patients	A[1] Preoperative Classification I[2]	II[2]	III[2]	%III	B[1] Number of Patients	B[1] Postoperative Classification I[2]	II[2]	III[2]	%III
October	25	15	6	4	16	22	14	0	8	36
November	32	18	4	10	31	19	9	3	7	37
December	17	11	2	4	24	24	13	0	11	46
January	41	32	4	5	12	32	17	2	13	44
February	67	51	3	13	20	41	20	2	19	46
March	87	49	28	10	12	55	30	13	12	22
April	67	44	18	5	7	63	27	19	17	27
May	55	42	12	1	2	68	43	9	16	24
June	86	73	7	6	7	67	41	11	15	22
July	66	56	8	2	3	83	44	14	25	30
August	67	57	6	4	6	61	34	10	17	28

1. Preoperative Classification:—A[1]—Clean operations, B[1]—Operations in which gastro-intestinal tract is opened or pus is found at operation.
2. Postoperative Classification:—I[2]—Absolutely clean, II[2]—Intermediate (red flush, stitch abscess, drain, etc.), III[2]—Discharging pus from wound site.

In the more detailed investigation of gastrectomy and cholecystectomy operations in November and December, 1961, swabs were taken from the nose, wound site and perineum of each patient. In addition, nasal swabs were taken from all theatre and ward staff having contact with the patient. This survey revealed that at approximately half of the operations at least one member of the theatre staff was a carrier of staphylococci. Also approximately half the patients carried similar organisms in at least one of the sites swabbed. Swabbing at weekly intervals revealed staphylococcal carriers on all occasions amongst some members. Despite these possible sources of infection only 9 per cent. of these "potentially infected" (Group B) operations broke down. In those cases with wounds which did yield frank pus the patients and associated theatre staff were not nasal carriers. The survey was only a small one and no definite conclusions can be drawn. The results, however, do suggest that infection in these wounds occurred in the wards and not in the operating theatre.

(ii) *Brisbane General Hospital*

The wound survey in this hospital commenced in March, 1962. It was decided to investigate the incidence of wound infection after the following operations: herniorraphy, thyroidectomy, mastectomy, cholecystectomy, and gastrectomy. All patients undergoing these operations in five different surgical wards were included in the survey. Operations and wounds were classified in a similar manner to that used at Princess Alexandra Hospital except that cholecystectomies are regarded in the "potentially infected" category at the Brisbane General Hospital. The results after the first three months of the investigation indicate a very satisfactory low incidence of wound infection in the cases followed. The results are set out in Table CXXXIV.

TABLE CXXXIV

SURVEY OF WOUND INFECTION AT BRISBANE GENERAL HOSPITAL

Five Public Wards

Month	Preoperative Classification A Number of Patients	A Postoperative Classification I	II	III	%III	B Number of Patients	B Postoperative Classification I	II	III	%III
March	9	7	1	1	11	12	11	Nil	1	8
April	46	43	3	Nil	Nil	32	24	4	4	12·5
May	64	59	5	Nil	Nil	34	26	6	2	5·9

TABLE CXXXV

SHOWING INCIDENCE OF POSTOPERATIVE CLASS III WOUNDS IN FIVE TYPES OF OPERATIONS AT PRINCESS ALEXANDRA AND BRISBANE HOSPITALS

Operation	Princess Alexandra—June, July, August, 1961 Number of Wounds	Class III	%III	Brisbane General—March, April, May, 1962 Number of Wounds	Class III	%III
Herniorraphy	110	5	4·5	70	1	1·4
Thyroidectomy	25	Nil	Nil	13	Nil	Nil
Mastectomy	25	1	4	27	Nil	Nil
Cholecystectomy	56	4	7·1	53	6	11·3
Gastrectomy	41	7	17	22	1	4·5

(*e*) Staphylococcal phage typing

Numerous strains of staphylococci from cows with mastitis have been typed for the Veterinary Department of the Queensland University and this study is continuing.

From country hospitals 94 swabs, mainly nasal, have been cultured and staphylococci typed when isolated. These swabs have come mainly from the maternity staff of six hospitals where infection has been a problem in the newborn.

All the staff in the post-operative ward of the Brisbane Chest Hospital have had nasal swabs examined at regular intervals. Those found to be carrying coagulase positive *Staphylococcus aureus* have been treated and reswabbed.

(*f*) Air sampling

The bactericidal effect of fogging a room with 1 per cent. Hibitane was tested at Princess Alexandra Hospital by air sampling, swabs of walls, basins and windows also by making sweep plates of linen before and after exposure to the mist. The results showed that Hibitane was effective in reducing the number of airborne bacteria-carrying particles but was not effective for the bacteria on walls, basins and windows.

Vacuum cleaners have been suspected of scattering bacteria in hospital wards and thus a vacuum cleaner with and without a special bacterial filter was tested. It was found that the filter made no significant difference as the results showed that the number of airborne bacteria-carrying particles did not rise when the cleaner was being used without the filter.

Air sampling was carried out in the post-operative ward of the Brisbane Chest Hospital. The number of bacteria-carrying particles was low but coagulase positive *Staphylococcus aureus* was isolated in the treatment room despite the fact that the room had been swabbed down carefully after the last dressing. *S. aureus* (coagulase positive) was isolated from the ward curtains even though these were changed weekly.

(*g*) The Tuberculosis Laboratory

There has been a 33 per cent. increase in the volume of work in this section during the past year and it is anticipated that this work load will increase greatly in the future. Many more cultures and specimens are referred from country centres and metropolitan hospitals. Atypical mycobacteria are isolated frequently in peripheral laboratories and these are referred for identification and typing.

The atypical mycobacteria are typed according to the Runyon classification, in the absence of any other generally accepted scheme. This classification largely depends on the morphology of the colonies, the effect of differential incubation temperatures, the effect of exposure to light and the results of sensitivity tests and animal inoculation. In the past year, 95 cultures of atypical mycobacteria isolated from patients have been referred to Dr. Runyon for confirmation of our classification of these strains.

During the year only one bovine strain of *Mycobacterium tuberculosis* was isolated. It was recovered from a retired dairy farmer aged 67, living in Brisbane. He is stated to have had prolonged contact with infected cattle.

Sensitivity tests are being carried out on all newly isolated *M. tuberculosis* cultures, as a check after therapy and on all atypical mycobacteria isolated. Sensitivity tests have been performed on 287 atypical mycobacteria to date. The effect of ethionamid (trescatyl) on these atypical mycobacteria is being studied with interest.

Acting on the recommendation of the Subcommittee of the National Tuberculosis Advisory Council, the technique for performing sensitivity tests and the method of reporting results have been modified. Results are now expressed as a resistance ratio, that is the ratio of the minimal inhibitory concentration for the test strain to that for the standard strain H37RV. A resistance ratio of less than 4 indicates sensitivity. A resistance ratio of 4 indicates that the strain is probably resistant and the test should be repeated. A ratio of 8 or greater indicates that the strain is definitely resistant.

Sensitivity tests can be performed satisfactorily in the laboratory for isoniazid, streptomycin, P.A.S., ethionamid, cycloserine and viomycin. As yet no satisfactory technique has been found for pyrazinamide sensitivity tests, but the matter is being investigated.

Owing to the large number of slides requiring microscopic examination each day, it is proposed to procure equipment for fluorescence microscopy. It is hoped thereby to ease the burden of these tedious examinations.

10. HISTOPATHOLOGY

An additional 1,715 biopsy specimens have been submitted for examination this year. Biopsies are still being referred to the laboratory from the Queensland Radium Institute.

Amongst the routine biopsy material examined during the year the following are of interest:—Granulosa cell carcinoma in a child of 5 years; Cutaneous melanomata (43 cases); Chromoblastomycosis (7 cases); Sporotrichosis (2 cases); "Milkers nodule" (3 cases).

There has been an increase in the number of post-mortem tissues referred from Coronial autopsies performed in the country. This is to be encouraged as so often the cause of death in these cases is dependant on microscopic examination of tissues, and without this the cause of death would, in many cases, remain undetermined.

There has been an increase in the number of specimens submitted for exfoliative cytology for the detection of carcinoma of the lung. A careful follow-up of the patients concerned has been made and a satisfactory degree of accuracy has been achieved. The results of this follow-up over a 6-year period will be available for publication in the near future. A cytological technician for the Brisbane Chest Hospital has been trained.

11. THE INSTITUTE OF FORENSIC PATHOLOGY

A detailed study of all fatal traffic accidents is being carried out in conjunction with Dr. Jamieson and his colleagues. The post-mortem findings are all coded carefully for subsequent analysis. Blood and urine alcohols are performed in all cases dying within 12 hours of the accident and examinations for carbon monoxide are performed in all appropriate cases.

The investigation of cases of sudden death has been facilitated by the availability of the laboratory in the Institute. Bacteriological and biochemical examinations can now readily be made and frozen sections obtained when required. The preparation of all histological sections from post-mortem material is now done at the Institute.

An investigation into post-mortem biochemistry has been commenced and so far has been confined to cerebrospinal glutamine, urea and glucose.

In all cases of drowning a search for diatoms in lung juice is made as a routine. To date our results would suggest that the finding of diatoms may prove to be of considerable value in those cases where the cause of death is in doubt especially when putrefaction is advanced. Further work and the study of controls will be needed before the significance of finding diatoms can properly be evaluated.

A study of particular interest is the incidence of myocarditis as a cause of sudden death in infants and young adults. In one case an aircraft disaster was proven to be due to a sudden collapse of the pilot due to interstitial myocarditis. A case of myocarditis due to Coxsackie B4 virus was encountered in a 10-day-old infant. The virus was isolated in high titre.

In association with the College of General Practitioners a study of deaths due to bronchial asthma is being made. Already seven such cases have been encountered in the last six months.

12. PUBLICATIONS

Smith, D. J. W. (with Alexander, A. D.), (1961): "*Leptospira robinsoni,* a New Serotype of the *pyrogenes* Serogroup", Austral. J. exp. Biol., 40, 81.

Stallman, N. D. (with Powell, O. W.), (1961): "The incidence and significance of Phase I complement fixing antibody in Q fever" (in the press).

Tonge, J. I., and Smith, D. J. W. (1961): "Leptospirosis acquired from soil", Med. J. Aust., 2, 711.

Tonge, J. I., and Kennedy, J. M. (1961): "An outbreak of Q fever in an abattoir near Brisbane" (in the press).

QUEENSLAND GOVERNMENT CHEMICAL LABORATORY

Director, Government Analyst and Chief Inspector of Explosives: I. L. B. Henderson, B.Sc., A.R.A.C.I.

Deputy Director and Inspector of Explosives: V. R. Cundith, B.Sc., A.R.A.C.I.

The Government Chemical Laboratory provides a chemical analytical and advisory service for all Queensland Government Departments, with the exception of the Department of Agriculture and Stock which maintains its own specialized laboratory service. It also provides a complete service in Queensland for the Commonwealth Departments of Customs and Excise and of Primary Industry, and performs analytical work for other Commonwealth Departments and for the Territory of Papua and New Guinea.

The Laboratory carries out the testing for safe storage, transport and use of all industrial explosives which enter the State. Regular examinations are made of all explosives held in the State magazines for periods longer than three months.

ACCOMMODATION

The position as regards accommodation remains static since there is no room available for expansion in the present building. Most sections are working under cramped conditions. It is hoped that when the new Health building is completed in George Street additional space will be made available to the Laboratory in the present building.

EQUIPMENT

The year has seen the installation and functioning of major items of equipment in the form of a gas chromatograph and an infra-red spectrophotometer. These modern instruments already have proved of great value to the Laboratory as a whole, quite apart from specific functions such as the employment of the gas chromatograph in the examination of natural gas samples in connection with the search for oil in Queensland.

SAMPLES

A record total of 29,133 samples was examined during the year. This was an increase of 1,580 samples as compared to the previous year.

SECTION 1

FOODS, DRUGS AND WATERS

H. G. Dunstan, B.Sc., A.R.A.C.I., Chief Chemist, Officer in Charge

Table CXXXVI gives the source and number of the samples examined:—

TABLE CXXXVI

Department	Number of Samples
Health and Home Affairs	6,127
Irrigation and Water Supply	1,785
Other Government Departments	816
Local Government	36
Public	176
Total	8,940

TABLE CXXXVII

Summary of Samples of Foods and Drugs Examined for the Department of Health and Home Affairs

Nature of Sample	No. of Samples
Beverage or Cordial	344
Bread	293
Disinfectant or Insecticide	71
Drug or Medicine	225
Fruit or fruit juice	40
Meat	353
Milk—official	3,147
Milk—unofficial	69
Milk product	90
Paint or paint scraping	332
Spirituous Liquor	12
Tobacco	61
Toilet Preparation	27
Toy	40
Vegetable	10
Miscellaneous	565
Total	5,679

The miscellaneous samples include ginger, nuts, confectionery, food dye, smoke essence, pump packing, marking ink, soil, plastic containers, luminescent beads, flooring materials, hypodermic syringes.

TABLE CXXXVIII

Details of Legal Samples Taken by Inspectors in Accordance with the Provisions of "The Health Acts, 1937 to 1960"

Nature of Sample	Number Examined	Passed	Failed
Milk	3,147	2,991	156
Paint and paint scraping	247	142	105
Minced meat	197	163	34
Sausage	72	68	4
Bread	29	19	10
Soft Drink	9	6	3
Drug	8	0	8
Cream	7	7	0
Spirituous Liquor	6	2	4
Toy	3	0	3
Insecticide	1	0	1
Buttered Sandwich	1	0	1
	3,727	3,398	329

MILK

The large number of milk samples proved the satisfactory standard of the milk supply. The results were comparable with those of the previous year—95 per cent. conformed with official requirements, 3·2 per cent. were deficient in fat, 1·3 per cent. were naturally poor and 0·5 per cent. contained added water.

Fourteen watered milks were examined and these came from:—Barcaldine (1), Beenleigh (2), Brisbane (1), Charters Towers (1), Dirranbandi (1), Ipswich (1), Longreach (1), Mount Isa (1), Nambour (1), Southport (3), and Warwick (1).

The average fat content, 3·88 per cent. was almost identical with that of the previous year (3·89 per cent.).

MEAT

Samples of minced meat and sausages were again submitted in large numbers. Adulteration of minced meat with sulphur dioxide was greatly reduced and only four samples of sausages contained more than the prescribed maximum proportion of this preservative.

Canned meat and canned meat products were found generally satisfactory.

FLOUR

The quality of white flour was good throughout the year, with average protein content 12·7 per cent. and "Protein Rich" flours all conformed with the requirement of 15·4 per cent. protein in the water-free substance.

Meals for the baking of wholemeal bread and brown bread were generally correct but a few were somewhat deficient in wholemeal content. These meals warrant continual testing.

BREAD

Some 260 samples of bread were judged on quality as well as on conformity with standards of composition. Relatively few loaves were below a fair standard of quality and in these the predominant faults were low volume, burnt crust and poor crumb texture.

Deficiency in wholemeal content was shown by 10 of the 29 legal samples tested for this purpose.

The dry solids content of 89 loaves and the milk solids content of 11 loaves were determined for the Department of Weights and Measures.

DRUGS AND MEDICINES

The purity of drugs and the composition and claims of proprietary lines were examined. Deteriorated drugs received from hospitals and pharmacies were destroyed and certificates issued for record purposes.

Surveys were made of olive oils, medicinal paraffin oils and teething preparations.

No serious fault was found in any of the samples investigated.

SOFT DRINKS

Most of the 333 soft drinks conformed with the respective standards. A few fruit drinks failed on fruit juice content and one kola type drink contained excess caffeine.

PAINTS

Prepared paints were found to be free from lead and correctly labelled. Of 152 samples of paint scrapings taken from dwellings, 101 samples contained more than five per cent. of soluble lead. Most of these came from investigations of the cause of actual lead poisoning occurrences and the presence of lead was expected. Nevertheless, it would be foolish to disregard the potential danger of old paintwork.

DANGEROUS SUBSTANCES

"The Dangerous Substances Regulations of 1961" came into effect during the year and contain packing and labelling requirements for substances not embraced by "The Poisons Regulations of 1958" but still considered hazardous to young children.

Thirty-two samples were analysed to see whether they came within the scope of these regulations. A wide range of preparations was tested and included insecticides, disinfectants, floor and automobile polishes, lacquer thinners, plastic hardener, paint and paint brush cleaners, bleaching solutions and grease solvents.

The analysis of these preparations was afforded great assistance by the instruments available—Gas Chromatograph, Ultra-Violet and Visible Spectrophotometer and Infra-Red Spectrophotometer. Extra equipment is projected to extend the use of these instruments and enable adoption of quicker and more efficient techniques.

WORK FOR OTHER GOVERNMENT DEPARTMENTS

Tender and supply samples for the Department of the Army included sausages, canned meat, canned fruit, bread and toilet paper. The Government Storekeeper required testing of washing powders, marking inks and hypodermic syringes. Drinking straws were examined for the Department of Education, loaves of bread and confectionery for Weights and Measures and bread for the Prices Commissioner.

Drugs for hospital use were subjected to the rigorous tests of the British Pharmacopoeia. Samples of foods, waters and drugs are received from the Territory of Papua and New Guinea, and several of our analysts have been appointed analysts for the Territory to enable their certificates to be legally acceptable in the courts of the Territory.

MISCELLANEOUS

Six samples of olive oil were genuine and of the necessary purity.

Paraffin oils (6) conformed with requirements.

Four teething preparations were free from calomel and safe for use.

Nineteen samples of preserved ginger were tested for the Buderim Ginger Growers' Association.

Hypodermic syringes were tested for the State Stores Board and some of the small capacity syringes were defective. Efficient accurate syringes are essential especially for concentrated injection materials.

Luminescent ornaments and toys did not contain radioactive substances.

Electroplated meat hooks were rejected because the coating was cadmium—a poisonous metal not permitted in contact with foodstuffs.

Of six legal samples of spirituous liquors four were adulterated with water.

A sample of "bread and butter" was, in fact, bread and margarine.

Mandarins coloured with the permitted dye, Citrus Red No. 2, were not stamped "artificially coloured" as required.

Progress was made in detection and determination of permitted food colouring. Ten of a batch of eleven imported dyes contained only 50 per cent. of pure dye and were unsuitable.

A skin lotion contained 8 per cent. of sulphuric acid.

Eyedrops of pilocarpine nitrate which caused distress were found to contain a trace of atropine.

Foreign objects in foods were submitted by the public and included:—Dried paint in bottled milk, soap from a milk can, pencil eraser in soft drink, glass in peanut paste, piece of iron and wood in bread and bone in sausage.

Contaminated foods included:—Coffee with boracic acid, malted milk powder with Dettol, sugar with Glauber's salt, beer with mould and with kerosene.

Fruit and vegetables were examined for spray residues and several samples were condemned. The regulations demand that any fruit or vegetables sent to market shall be "clean and free from any spray residue or any other foreign substance which is deleterious, objectionable or injurious to health".

WATERS SUB-SECTION

A record number of 3,110 samples of water, sewage and industrial waste was examined during the year.

The various sources of these samples, State and Commonwealth Government Departments and the general public, and the numbers submitted by each are as follows:—

TABLE CXXXIX

Source	Number of Samples
Water—	
Department of Health and Home Affairs ..	448
Irrigation and Water Supply Commission ..	1,785
Department of Local Government	36
Department of Harbours and Marine	232
Miscellaneous Government Departments ..	146
Public	171
Sewage and Industrial Waste—	
State Government Departments	252
Commonwealth Government Departments ..	40
Total	3,110

For eight months of the period under review, six officers were fully engaged in the Waters Sub-Section.

The greatest increase in the number of samples was in those submitted by the Irrigation and Water Supply Commission, and although on several hundred of these the only determination made was that of Electrical Conductivity, the total amount of analytical work carried out for the Commission was greater than in any previous year.

In connection with a proposed sewerage system for the Gold Coast, the Dissolved Oxygen content of samples taken each month from the Nerang River at three separate places has been determined to assist in assessing the ability of the river to receive and assimilate sewage effluent and still maintain a dissolved oxygen content sufficiently high to maintain aquatic life.

SECTION 2

TOXICOLOGY, BIOCHEMISTRY, INDUSTRIAL HYGIENE AND AIR POLLUTION

G. LAHEY, M.Sc., A.R.A.C.I.—Officer in Charge

The total number of specimens submitted for examination by this Section was 3,067.

TOXICOLOGY

Of a total of 542 specimens examined during the year, 455 were in connection with 176 postmortem examinations. The majority of these examinations were at the request of coroners throughout Queensland.

Various barbiturate drugs were associated with 94 of these, the most common being pentobarbitone (45) and carbrital (17). Other poisons found included arsenic (3), strychnine (3), aspirin (3), alcohol (3), parathion, meprobamate, chlorpromazine, chloral, paraldehyde, cyanide. Of the remaining examinations 61 did not disclose any poison, but were considered necessary to exclude poison as a possible cause of death.

Five specimens of dog and cow viscera were examined and 3 suspected baits. Other specimens examined included foodstuffs, water, clothes, anaesthetics, drugs.

Evidence in court was given in a number of cases.

BIOCHEMISTRY

Biochemical specimens were examined for the Laboratory of Microbiology and Pathology, Government Medical Officers, Police Department, the Director of Industrial Medicine, Hospitals and medical practitioners.

The nature, significance and number of such specimens are shown in the following table:—

TABLE CXL

Nature of Specimen and Significance	Number of Specimens
Blood and Urine for alcohol	1,047
Urine, blood and bone for lead	1,029
Hair, Nail and Urine for arsenic	206
Blood, Urine and C.S.F. for drugs	60
Stomach washings for drugs	48
Blood for carbon monoxide	28
Miscellaneous	37
Total	2,455

The miscellaneous item includes estimations of mercury and copper in urine, arsenic and lead in drinking water.

Determination of alcohol in blood and urine are carried out for Government Medical Officers (chiefly in connection with charges against motorists), for the Police Department (chiefly in connection with road accident investigations), and for Government Pathologists, who submit postmortem specimens in appropriate cases.

INDUSTRIAL HYGIENE

Excluding biochemical specimens, the number of samples examined for the year was 46.

Eleven investigations were undertaken during the year including:—

Atmospheric tests at a cotton spinning mill, an engineering workshop, a city office, a large garage and a telephone exchange.

Dust counts at a woollen mill and a bulk loading point.

Determinations of asbestos in air during the spraying of "limpet asbestos".

Lead in air at a metal recovery plant.

Tests on the use of kerosene room heaters in schools.

Inspection of a degreasing plant using chlorinated hydrocarbons.

An Officer of the Section assisted the Housing Commission during the fumigation of several buildings with methyl bromide.

The Section is assisting the Department of Agriculture and Stock in a survey of banana growers for arsenic intoxication. To date 22 urine specimens have been examined (listed in Biochemical Section).

AIR POLLUTION

The number of samples examined during the year was 24.

A survey of deposited pollution and smoke in Brisbane is continuing.

SECTION 3

MINING, MINERALOGY and METALLURGY and EXPLOSIVES

V. R. CUNDITH, B.Sc., A.R.A.C.I.—Officer in Charge

The Table CXLI—shows the sources of work done by this Section and the number of samples from each, to account for a total of 9,420 samples.

TABLE CXLI

Department	Number of Samples
Geological Survey and Mines Department ..	1,340
Coal Board	501
Portmaster (Explosives)	6,766
Other Departments (includes tiles)	674
Public	83
Commonwealth Departments	56
	9,420

MINES DEPARTMENT AND GEOLOGICAL SURVEY

General

The greater proportion of the work was in assaying ores of gold, silver, lead, copper, tin, zinc, manganese, nickel, cobalt and uranium.

In addition there were cyanidation tests, and checks for cyanide contamination of water, where effluents from cyanidation plants are discharged in creeks or rivers.

Mine Air

Mine Air samples were examined to determine incipient heating in collieries or gauge whether control measures had been effective in coping with fires in the workings or sealed areas.

Of interest are the results of analyses of a few of the samples of mine atmospheres taken at various places in a colliery, following the occurrence of a fire in the workings.

Sample No.	1	4	1	2
Date taken	15–1–62	17–1–62	23–1–62	25–1–62
	Per cent.	Per cent.	Per cent.	Per cent.
Carbon Dioxide ..	8·2	11·1	9·0	7·7
Oxygen	5·4	1·3	2·9	2·2
Methane ..	0·35	0·50	0·22	0·17
Carbon monoxide	0·007	0·001	Not detected	Not detected
Nitrogen ..	86·1	87·1	87·9	89·9

These figures indicated complete extinction of the fires. Subsequent entry and examination by men wearing proto outfits verified this.

CLAYS

Clays (109 samples) were tested as to suitability for bricks, pipes, tiles, white ware or bloating. Bloating clays yield scoriaceous light weight material when fired at temperatures 1200–1300°C. The product is used to provide a light weight concrete with high strength low shrinkage, good elasticity and durability.

ANALYSIS (fire clay)

	1	2
	Per cent.	Per cent.
Alumina (Al_2O_3) ..	22·9	23·8
Lime (CaO)	Nil	trace
Magnesia (MgO)	0·2	trace
Potassium Oxide (K_2O) ..	0·8	0·2
Sodium Oxide (Na_2O)	0·2	0·08
Iron Oxide (Fe_2O_3)	0·7	0·4
Silica (SiO_2)	68·3	67·2
Water (H_2O)	6·9	8·5
Fire Test to 1550°C	fully vitrified part fused	fully vitrified, signs of incipient fusion

These clays would be suitable for the manufacture of fire bricks for use at temperatures below 1500 degrees C.

Oils and Gases

Samples of bore gases, oil, sludges and waters were received in connection with "search for oil" projects.

The high degree to which the gas chromatograph can separate methane and higher homologues, isomers or other components in a natural gas is shown in the following analyses done with the apparatus.

	1	2	3
	Per cent.	Per cent.	Per cent.
Carbon dioxide moles ..	0·5	69·4	0·42
Methane	76·3	27·9	89·7
Ethane	9·4	0·61	4·9
Propane	6·8	0·08	2·0
Iso Butane	1·8	0·017	0·58
N Butane	2·1	0·015	0·30
Iso pentane	0·6	0·017	0·26
N pentane	0·6	0·006	0·09
Nitrogen and or oxygen ..	2·1	2·0	1·7

NOTE.—No. 3 column shows the analysis of a natural gas from which the mineral oil has been separated by condensation. The gas is used as fuel at the Roma Power House.

ORE ANALYSIS

Sands for glass manufacture

	1	2	3	4
	Per cent.	Per cent.	Per cent.	Per cent.
Sinks in Bromoform ..	0·6	0·14	1·5	3·7
ANALYSIS (Floats)—				
Moisture	Nil	Nil	Nil	Nil
Loss on ignition ..	0·2	0·2	0·3	0·3
Silica (SiO_2)	99·4	99·0	99·0	99·0
Iron Oxide (Fe_2O_3) ..	0·06	0·16	0·18	0·21
Alumina (Al_2O_3) ..	0·20	0·40	0·40	0·30
Lime	trace	trace	trace	trace
Magnesia				

the sinks consisted of ilmenite, rutile and zircon.

BERYLLIUM ORE (from Mount Isa district)—

	1	2
	Per cent.	Per cent.
Beryllium Oxide	12·6	11·0

MAGNESITE—

	1	2
	Per cent.	Per cent.
Moisture	0·2	0·1
Loss on Ignition	50·0	51·5
Silica	1·3	0·1
Iron Oxide	0·2	0·1
Lime	2·2	1·0
Magnesia	43·7	47·0
Alumina	1·7	0·1

CONCENTRATES—

	Per cent.
Sulphur (S)	14·4
Zinc (Zn)	25·5
Lead (Pb)	7·1
Tin (as SnO_2)	2·6
Silica (ScO_2)	11·2
Tungstic Oxide (WO_3) ..	trace
Copper (Cu)	trace
Iron (as Fe_2O_3)	36·0
Alumina (Al_2O_3)	1·3
Manganese Oxide (MnO) ..	0·7
	98·8

COAL

Samples Received	1960-1	1961-2
ex Geological Survey	1,155	929
Coal Board	413	501
	1,568	1,430

The pressure of coal work has been consistent over a number of years, due to drilling activities maintained by the Mines Department and developments on the Kianga and Moura Coal fields.

Calorific value, ultimate analyses, proximate analyses, ash, fusion point of ash, specific gravity, sulphur and swelling indices, small scale washability tests are usually required by the Government Geologist, whilst large scale washability tests, ultimate analyses, proximate analyses, coking tests, specific gravity and ash are the main requirements for the Coal Board.

OTHER DEPARTMENTS

The consultative and analytical services supplied by the Section have been well utilised.

Corrosion problems, solder, bricks, galvanised iron, oxygen, brines, salt, cement aggregates, asbestos, wood preserving liquids, all types of metal, tiles and Golden Casket discs indicate the diversity of work.

Aggregates for concrete

Certain aggregates containing opaline silica and certain types of volcanic glass have been found to cause failure of concrete in the more massive construction jobs.

A number of samples were submitted to the Mielenz test for reactivity to alkali; the test is designed to determine suitability of aggregate for concrete work.

Some additives for concrete mixes such as calcium ligno sulphonate a by-product of the wood pulp industry were also examined.

Tiles

All of the 293 tiles conformed with the Specification in respect of colours used in or on them. These tests were initiated some 12 years ago to ensure that no harmful pigments such as red lead were used as colouring agents.

Corrosion

The Section was associated with the R.A.F. in the successful internal rust proofing of light weight steel oxygen cylinders by phosphate treatment.

Examination of a bolt, nut and washer plate from an old timber baulk which had been immersed in mine water for a considerable time, showed complete replacement of the iron by copper with retention of shape of the bolt, washer plate, and nut.

Aviation Oxygen

Supplies of aviation oxygen were regularly tested throughout the year. The oxygen content ranged from 99·4 to 99·7 per cent., and the moisture content was well below the upper limit of 20 milligrammes per cu. metre.

SECTION 4

FEDERAL DEPARTMENTS, PUBLIC WORKS, HOUSING COMMISSION, MAIN ROADS, &c.

J. Adamson, A.R.A.C.I., Chief Chemist, Officer in Charge

The following table is a detailed list of the samples examined by this section:

TABLE CXLII

Customs and Excise	1,964
Primary Industry	1,738
Housing Commission	1,542
Public Works Department	1,264
State Stores	612
Explosives (fireworks)	386
Main Roads Department	109
Other Government Departments ..	81
Public	10
Total	7,706

The number of samples examined by this Section was slightly below that of the previous year.

The work carried out in this Section is exceedingly diverse particularly that carried out for the Federal departments. Much of it is of a confidential nature particularly that carried out for the Customs Department.

The work from the Department of Primary Industry is of great importance to the exporters of primary products as it deals largely with the maintenance of export standards.

The Housing Commission and the Department of Public Works sent in a large number of paint samples most of which were of a satisfactory nature. This continual checking of paints used on houses and public buildings has caused a considerable improvement over the years in the paints used.

The State Stores Board continues to avail itself of the service of this Laboratory. The necessity for a greater policing of deliveries was forcibly demonstrated in the matter of toilet paper considered suitable for use in septic systems.

A few fireworks which contravened the regulations were condemned and destroyed. There is an element of risk in the use of any fireworks but most accidents are attributable to carelessness or downright misuse.

The rest of the work was supplied by the Main Roads Department, the Railway Stores and other Government departments.

DIVISION OF GERIATRICS

Director of Geriatrics: P. G. Livingstone, M.B., B.S. (Q'ld.), M.R.C.P., (Ed.)

GERIATRIC UNIT, PRINCESS ALEXANDRA HOSPITAL

The Director of Geriatrics commenced duty on the 3rd July, 1961. His first task was to establish a Geriatric Unit at Princess Alexandra Hospital. The first ward of that Unit had just been completed and was occupied by patients on the 10th July, 1961. Ward S4 is a completely new building in place of one of the very old "Chronic" wards. It has accommodation for 52 patients with large lounge, dining and physiotherapy areas.

The following are details of admissions and discharges to this ward from 10th July, 1961, to 30th June, 1962.

TABLE CXLIII

Showing Admissions and Where From:—

—	Total	Princess Alexandra Hospital (Acute) Section	Princess Alexandra Hospital (Chronic) Section	Brisbane Hospital	Private Homes	Private Hospitals	Convalescent Homes	Brisbane Menta Hospital
Males	173	90	14	34	21	12	1	1
Females	193	94	18	37	41	2	1	..
Totals	366	184	32	71	62	14	2	1

TABLE CXLIV

Discharges—Transfers—Deaths:—

—	Total	Home	Princess Alexandra Hospital (Acute) Section	Princess Alexandra Hospital (Chronic) Section	Eventide	Convalescent Homes	Ward 16	Died	Brisbane Hospital	Epileptic Home
Males ..	176	104	5	25	6	13	4	15	2	1
Females ..	200	118	10	28	7	15	1	22	..	..
Totals ..	376	222	15	53	13	28	5	37	2	1

It is seen from Tables CXLIII and CXLIV that 50 per cent. of the patients came from the acute section of Princess Alexandra Hospital, 19 per cent. from the North Brisbane Hospital, and 21 per cent. from their own homes, Convalescent Homes or Private Hospitals. Fourteen per cent. of the admissions required permanent hospitalization in the chronic wards of the Hospital, but it should be noted that 10 per cent. of admissions to Ward S4 were patients who were in the chronic section. This makes a failure rate of 4 per cent. but it is important to remember that considerable selection was used in assessing patients for admission. The failure rate could be 20 per cent. if no such selection was made. Twenty-one per cent. of admissions were from outside the public hospitals. This proportion will increase until approximately 50 per cent. of patients are from the acute wards of general hospitals and 50 per cent. from outside. This requires the standard and numbers of medical officers to be equal to any other Unit in the General Hospitals. The work of a Geriatric Unit is to treat elderly patients with subacute or chronic conditions, but facilities must also be available to treat elderly patients with acute conditions or acute exacerbations in the course of a chronic condition if the local general practitioners refer such patients to the Unit.

Some pre-admission assessment is carried out in every case unless the general practitioner indicates the admission is very urgent. The Director of Geriatrics has carried out 75 home visits during the year with the full approval of the patients' private doctors. Thirty per cent. of such patients have not required admission, the problems being solved by attendance as a day patient, or by admission to Eventide, Sandgate, or a suitable convalescent home. This has meant a big saving in hospital beds. Also it allows the Director to see the conditions under which the patient is living and the family relationships. This aspect of the work is of great importance and, as more staff is available, it will be extended. Twenty-five pre-discharge or post-discharge assessments have been carried out by the Director and the Senior Physiotherapist or Occupational Therapist visiting the patients' home to help with the problems of resettlement. This service also will be extended in the future.

Looking at the table of discharges it is seen that 59 per cent. of patients were discharged to their homes or to relatives, and 12 per cent. died. This percentage will increase as more direct admissions occur. It is interesting to note that 5 patients were transferred to Ward 16. Of these 4 males were all under 65 years of age and had previously been admitted from the Neurosurgical Unit of the Brisbane Hospital. The one female patient had previously been in the Brisbane Mental Hospital. No patients suffering from cerebral arteriosclerosis or senile dementia were sent to Brisbane Mental Hospital from this Unit.

The second Ward is almost completed. It will have accommodation for 50 in-patients with similar lounge and physiotherapy facilities as Ward S4. Construction has commenced on the centre block which will join both wards and contain administration section, physiotherapy department, day hospital and occupational therapy department. This should be completed early in 1963.

At the present time the Geriataric Wards and Chronic Wards are separate. On completion of the building programme and further increase in staff, these two sections will become one, and all called a Geriatric Unit. Patients will be first admitted to the acute section of the Geriatric Unit for assessment. Beds in the long stay or chronic section will then be filled by patients who are already in the acute section. There will be no direct admissions to the long stay section of the Unit.

An outpatient session was commenced on Friday, 3rd November, 1961, in the main Outpatient Department of the acute hospital. This session has become regular each Friday afternoon. It is used as a follow-up of past inpatients and as a clinic for assessment of new patients referred for admission. This clinic has been conducted by the Director and, in his absence, by the Geriatric Registrar. The number of attendances has slowly increased and with the doubling of the inpatient numbers on the opening of Ward S5, it may be found necessary to have this session increased to two afternoons per week. Further medical staff will be required to carry this out.

The day hospital has developed slowly during the year. These patients attend Ward S4 for the full day having been transported to and from the hospital by the ambulance. At present 10 patients attend each day. The average number of attendances for each patient per week is 1·5 days. Many admissions to hospital have been prevented by day attendance, and many patients have been discharged at an earlier date than would have been otherwise possible, with resultant saving in hospital beds. The mixing of day patients and inpatients is not saticfactory. It also very severely overloads the ward. We look forward to the time when day patients have their own facilities.

The staff of the Geriatric Unit consists of 1 medical registrar, 3 physiotherapists, 2 occupational therapists, 1 part-time speech therapist, 1 secretary, and 1 social worker (part-time). These numbers will be slowly increased as the Unit grows. Staff conferences are held twice each week to discuss each inpatient in detail and to plan his future programme. Conferences are also held once each month to discuss the day patients. Finally, a conference is now held every second month to critically review past patients.

The splint department at the Hospital has been used very extensively during the year. Ninety-one calipers of all types were ordered and supplied. Close co-operation between this Unit and the head of the splint department has made possible the development of various calipers completely new to Queensland. Details of the calipers supplied are as follows:—

Capener Wires	36
Double below knee irons	38
Single below knee irons	8
Long, weight-bearing calipers	2
Long, non-weight-bearing calipers	5
Knee cage	1
Double below knee iron with extension	1
Total	91

Many new nursing procedures have been carried out in an effort to reduce the incidence of pressure sores and contractures in the elderly sick. Various types of splinting, with plaster, aluminium, and polythene have been used with varieties of suspension. Investigations into the value of various lotions and sprays in the prevention of bedsores has also been carried out. Sheep skins are now being used in a trial of their value in this field. It is hoped to be able to carry out more extensive investigations into nursing procedures when a few simple pieces of equipment are available.

Visits to Country Centres

Visits have been made to the larger country centres by the Director during the year. This was to ascertain the geriatric needs of these areas. It has been found that similar problems prevail here as in Brisbane, but because of the distances involved, services will have to be set up with particular emphasis on local needs. A similar service is visualised as now operates with the Tuberculosis service. A Geriatric Unit established in each large general hospital under the control of a Senior Medical Officer. Such a Unit will cover many small towns within a radius of the General Hospital. Details of each service would be planned and developed by the Medical Officer with help and supervision from the Division of Geriatrics. Delay in establishing such Units is due to lack of suitable staff, both medical and ancillary.

Visit of Dr. L. Cosin

Dr. Cosin, Clinical Director, Cowley Road Hospital, Oxford, visited Queensland in November, 1961, at the invitation of the Minister of Health. Dr. Cosin visited the Geriatric Unit and attended a clinical meeting at that Unit as well as a similar meeting in the acute section, Princess Alexandra Hospital. Visits to an Old People's Home, a day club at Ipswich, Mt. Lofty, Toowoomba, Cairns and Townsville, were arranged. Lectures were given by Dr. Cosin to medical practitioners to the Old People's Welfare Council, and to the Queensland Society of Health. These talks were very interesting and most people present gained a wealth of valuable knowledge.

Departmental Referrals

Fifteen patients were referred to the Director through the Department during the year. The outcome of the investigations into each case was as follows:—Two patients were admitted to the Geriatric Unit, and of these, one went home and one to a Convalescent Home; two patients were admitted to Eventide; two patients remained in their own homes once the immediate crises were resolved; three attended the Geriatric Unit as day patients; three who were in Convalescent Homes remained there; one patient was recommended for admission to Chermside Senile Annexe; and two patients attended the Geriatric Outpatient Clinic.

Pylons for Elderly Amputees

These special prostheses for elderly amputees were obtained from the Limb Fitting Centre, Roehampton, England. Various firms in Brisbane have quoted for their manufacture. These pylons are about one quarter the cost of fully articulated limbs and much easier for an elderly patient to manage. Rehabilitation of such patients when pylons have been provided will be carried out at the Geriatric Unit.

Plans for the Future

An investigation into the senile patients admitted to Ward 16, Brisbane Hospital, and who were subsequently transferred to Brisbane Mental Hospital, was carried out. Following this, a report has been submitted for the development of a Geriatric Psychiatric Assessment Unit in association with a Geriatric Unit. This Unit would have residential accommodation and day centres under its care. It is hoped that such a plan will make it possible to maintain the large number of senile patients in the community and prevent admission to a mental hospital. It would also reduce the number of beds which would be required in institutions.

A Geriatric Unit is required for the northern suburbs of Brisbane and it is hoped that a start will be made soon at the Brisbane Chest Hospital.

The Geriatric Unit at Princess Alexandra Hospital should be completed early in 1963. Following this, "chronic" wards will be renovated and these will be grouped with the Geriatric wards to form one Unit.

DIVISION OF NURSING

Adviser in Nursing: E. W. S. Sullivan, R.A.N.F.

The Division continues to receive numerous enquiries regarding conditions and the availability of positions in Queensland hospitals. Interviews have been held with many nurses, both interstate and overseas, and particularly with those nurses from overseas who wish to obtain recognition of their qualifications, in order to practise their profession in Queensland.

A large area of the State has been covered in routine visits to hospitals. The hospitals at Charleville, Longreach, Mount Isa, Cloncurry, Julia Creek, Richmond, Innisfail, Hughenden, Charters Towers, Townsville, Cairns, Ingham, Tully, Dirranbandi, St. George, Goondiwindi, Inglewood, Texas, Warwick, Stanthorpe, Rockhampton and Gladstone, in addition to the Women's Hospital and the Children's Hospital in Brisbane, and Eventide Home Charters Towers have been visited. General nursing conditions and the staff situation have been investigated.

The availability of trained nursing personnel for our hospitals is still a matter for concern, but the supply of student nurses has maintained the improvement shown last year. Many girls are being referred to the Division by Matrons of large hospitals, either because they cannot meet the required educational standard set by these hospitals or because they do not wish to wait for a vacancy at that particular hospital. The Division has, in many instances, been able to place these girls in hospitals in the country. It is felt that some provision will have to be made for the girl who cannot meet the higher educational qualifications set by most hospitals. Many girls are continuing their academic education whilst waiting for vacancies to occur in the training hospitals, so that next year there will be an increased number of student nurses educated to Senior standard.

The Division works in close liaison with the College of Nursing, Australia, and endeavours on all occasions to interest trained nurses in post-graduate education.

The annual conference of the Queensland Matrons was held from the 14th to the 18th May, 1962. This conference was officially opened by the Honourable G. W. Chalk, Acting Minister for Health and Home Affairs, in the absence of Dr. Noble overseas. Seventy-four Matrons from hospitals and other institutions attended. They expressed keen interest in all lectures and joined in discussions. The proposed curriculum for general nurse training was approved and presented to the Honourable the Minister on his return. The Matrons felt that this curriculum should be an interim one and should be reviewed within four years.

The Division regrets that the survey of student nurse wastage does not show any improvement in the wastage situation. These statistics are shown in Table CXLV.

Table CXLV—Wastage of Student Nurses—Queensland Hospitals for the Year 1961

Hospital	Daily Average	Student Enrolment					Total Year 1961	Wastage of Students						Percentage of Total	Age Groups						Educational Standard					Reason Given for Leaving						
		1st	2nd	3rd	4th	5th		1st	2nd	3rd	4th	5th	Total		17 and under	18	19	20	21+	Not known	8th and under	Sub. Jnr.	Jnr.	Above Jnr.	Not known	Not suited	Fail Exams	Marraige	Personal	Health	Domestic	Others **
Atherton	63·2	11	9	11	4	..	35	4	1	1	2	..	8	22·9	2	..	2	..	3	1	3	3	2	..	..	..	1	1	..	..	1	5
Ayr	49·3	8	7	2	5	..	22	7	1	1	..	..	9	40·9	3	4	..	..	2	..	2	2	5	..	..	..	..	2	4	..	..	3
Barcaldine	12·4	1	2	3	2	..	8	1	1	..	..	..	2	25·0	..	..	..	2	..	..	..	..	2	..	..	..	..	1	1	..	..	..
Beaudesert	30·8	8	3	8	6	..	25	1	..	1	..	..	2	8·0	..	..	..	..	2	..	2	..	..	..	..	..	..	1	1	..	..	..
Biloela	20·6	13	2	..	..	..	15	1	2	1	1	..	5	33·3	..	..	..	4	1	..	4	1	..	..	..	..	..	2	3	..	..	..
Blackall	17·5	1	3	1	1	..	6	..	1	..	..	..	1	16·7	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	..	..	..
Boonah	15·0	2	..	1	..	..	3	2	..	..	1	..	3	100·0	1	1	..	..	1	..	2	..	..	..	1	1	..	..	1	..	..	1
Bowen	20·4	1	6	2	2	..	11	..	1	..	..	..	1	9·1	..	1	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..
Brisbane General Hospital	1,188·9	222	163	110	89	..	584	82	68	18	12	..	180	30·8	22	48	52	27	31	..	56	25	78	16	5	18	21	23	5	17	8	88
Brisbane Women's Hospital	293·9	125	129	..	..	..	254	22	1	..	..	..	23	9·1	..	..	..	1	22	..	4	1	14	3	1	2	..	5	..	2	4	10
Bundaberg	106·8	19	20	18	15	..	72	7	5	2	1	..	15	20·1	1	3	3	3	5	..	10	1	4	..	..	1	1	3	2	1	3	4
Cairns	140·7	16	16	24	14	..	70	11	5	2	..	..	18	25·7	3	5	3	1	6	..	6	3	9	..	..	2	2	3	4	2	2	3
Charleville	50·5	11	3	3	4	..	21	13	..	1	..	..	14	66·6	4	3	3	..	4	..	6	3	5	..	..	2	..	1	6	..	..	5
Charters Towers	33·9	8	4	4	7	..	23	1	4	..	..	..	5	21·7	..	..	4	..	1	..	1	3	1	..	..	..	..	2	1	1	..	1
Chinchilla	30·7	9	3	7	2	..	21	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Clermont	19·7	9	1	3	..	..	13	5	..	..	1	..	6	46·2	2	1	1	..	2	..	3	..	2	1	..	..	..	2	2	..	..	2
Cloncurry	28·3	3	4	..	1	..	8	2	2	1	..	..	5	62·5	2	2	..	..	1	..	3	1	1	..	..	..	..	..	..	1	..	4
Collinsville	21·2	7	1	2	1	..	11	1	1	1	..	..	3	27·3	1	1	1	..	..	..	2	1	..	..	..	..	2	..	1	..	..	..
Dalby	47·1	4	6	5	6	..	21	..	3	..	..	..	3	14·3	..	..	1	2	..	..	..	2	1	..	..	..	..	..	..	..	..	3
Gladstone	37·63	9	4	3	3	..	19	4	1	1	..	..	6	31·6	1	1	..	2	..	2	2	..	1	1	2	2	..	3	1	..	..	..
Goondiwindi	31·1	3	8	3	4	..	18	1	1	1	..	..	3	16·7	1	1	..	..	..	1	1	..	1	..	1	..	..	..	..	..	1	2
Greenslopes	496·0	22	21	10	6	..	59	3	..	1	..	..	4	6·8	..	1	1	..	2	..	1	..	1	2	..	..	..	1	1	..	..	2
Gympie	98·3	20	14	9	12	..	55	6	6	5	2	..	19	34·5	1	5	7	2	4	..	12	2	5	..	..	1	2	5	2	2	1	6
Herberton	25·5	4	7	1	4	..	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ingham	41·0	3	6	7	1	..	17	1	2	..	..	..	3	17·6	2	..	..	1	..	..	2	1	..	..	..	1	..	..	1	..	1	..
Innisfail	81·9	18	13	13	12	..	56	2	1	..	..	..	3	5·4	1	2	..	..	..	..	..	2	..	1	2	..	1	..	..	..	..	..
Ipswich	154·7	44	25	30	39	..	138	7	5	4	1	..	17	12·3	3	4	3	3	4	..	3	..	10	3	1	3	2	7	1	2	2	..
Isis	17·4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kilcoy	20·8	2	1	4	1	..	8	..	1	..	..	..	1	12·5	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Kingaroy	42·9	12	10	3	4	..	29	2	..	..	..	..	2	6·9	..	..	..	..	..	2	..	..	..	..	2	..	..	1	..	..	..	1
Longreach	18·3	6	4	1	2	..	13	7	..	1	..	..	8	61·5	..	4	2	..	2	..	3	..	3	..	2	3	..	1	3	..	..	1
Mackay	113·5	22	17	10	7	..	56	9	10	3	..	..	22	39·6	2	6	7	5	2	..	10	6	6	..	..	2	..	5	2	1	..	12
Mareeba	56·1	13	5	5	9	..	32	4	2	1	..	..	7	21·3	1	3	..	3	..	..	1	..	6	..	..	..	..	1	1	..	..	5
Maryborough	165·7	22	30	17	13	..	82	10	2	4	1	..	17	20·7	4	5	2	2	4	..	7	5	5	..	..	1	2	5	2	1	2	4
Miles	20·9	7	1	2	..	..	10	1	..	..	..	..	1	10·0	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..
Mitchell	23·4	3	1	2	..	..	6	1	1	..	..	..	2	33·3	..	1	1	..	..	..	..	..	2	..	..	..	..	1	..	..	..	1
Monto	15·2	3	3	1	3	..	10	..	1	1	..	..	2	20·0	..	1	1	..	..	..	..	..	2	..	..	..	..	..	2	..	..	..
Mossman	22·4	5	5	..	1	..	11	..	..	1	..	..	1	9·1	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
Mount Isa	39·5	..	..	..	..	..	30	8	3	..	..	..	11	36·7	3	3	3	1	1	..	6	1	4	..	..	3	1	3	1	..	..	3
Mount Morgan	28·1	14	1	4	3	..	22	..	7	..	2	..	9	40·9	2	3	2	2	..	..	6	..	3	..	..	..	..	6	2	1	..	..
Nambour	59·7	11	5	8	4	..	28	1	3	2	1	..	7	25·0	..	1	1	2	3	..	4	1	2	..	..	..	2	2	2	1	..	..
Princess Alexandra (South Brisbane)	981·87	114	100	99	96	..	409	15	34	7	10	..	66	16·1	5	16	17	11	17	..	24	4	31	5	2	5	4	15	11	7	5	19
Proserpine	24·0	7	3	3	5	..	18	..	1	..	..	..	1	5·6	..	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..
Rockhampton	183·4	23	32	17	20	..	92	15	4	3	..	..	22	23·9	4	10	3	2	2	1	10	1	7	..	4	3	1	3	2	..	1	12
Roma	56·2	19	6	5	8	..	38	3	5	2	1	..	11	28·9	1	1	2	3	3	1	8	..	1	2	..	2	..	1	6	..	..	2
Southport	46·7	17	12	11	4	..	44	7	1	..	..	..	8	18·2	1	2	1	1	3	..	3	2	2	..	1	..	..	1	2	..	..	5
Stanthorpe	36·7	4	7	8	4	..	23	1	2	2	1	..	6	26·1	2	1	..	..	3	..	4	..	2	..	..	..	2	3	1	..	..	..
Toowoomba	292·5	30	29	35	20	..	114	11	2	3	..	..	16	14·0	2	6	3	..	5	..	2	..	13	..	1	2	..	2	3	2	1	6
Townsville	274·0	60	28	30	23	..	141	15	19	7	..	..	41	29·1	3	15	8	7	8	..	14	6	17	3	1	7	12	7	4	1	1	9
Tully	27·0	4	5	3	3	..	15	..	1	..	..	..	1	6·7	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..
Warwick	72·0	13	11	6	7	..	37	13	2	1	1	..	17	45·9	3	6	3	1	4	..	7	1	7	1	1	3	1	..	..	..	..	13
Winton	8·4	3	2	3	..	..	8	1	3	..	..	..	4	50·0	..	..	2	1	1	..	1	..	..	..	3	..	..	2	2	..	..	..
Wondai	67·6	7	7	9	4	..	27	..	2	4	..	..	6	22·2	..	1	3	2	..	..	4	1	..	..	1	..	..	5	..	..	..	1
Totals	..	1,022	805	566	481	..	2,874	308	218	83	38	..	647	22·5	85	169	147	88	150	8	242	80	258	37	30	67	57	130	84	42	33	234

** Dissected as follows —

Left without notice	29
Left the district	23
Family Illness	9
Homesick	11
Another Position	26
Disliked nursing	7
Transfer	27
Can't cope	13
Retired or Dismissed	32
No wish to continue	6
Unsettled, unhappy	4
No reason given	28
Can't accept responsibility	2
Failed Probation	4
Disinterested	5
Wishes to return home	2
Further studies	2
Miscellaneous	4
	234

DIVISION OF SOCIAL WORK

Senior Social Worker: M. K. WHILEY, B.A., Dip. Soc. Stud. (Melb.)

During the past year, social work services to families in difficulties, for hospital patients, and for old people in their own homes have continued to develop as an integral part of the State's health, medical and welfare services.

In the Welfare and Guidance Clinics, social workers, as members of psychiatric teams, are working in close co-operation with other community services and have continued to help in relieving family stresses in the treatment of emotionally disturbed children.

In addition to the social work departments established earlier in hospitals, two new social work departments have been opened this year. The first is at Cairns Hospital in North Queensland where a recent Queensland graduate in social work will work in consultation with the social worker from the Townsville Hospital, and the other department is at the Brisbane Women's Hospital. Unfortunately, however, owing to the difficulties of obtaining suitably qualified and experienced staff, and in spite of extensive advertising, one of our largest Brisbane hospitals is still without social work services except in the Geriatric Unit.

As soon as resources permit, it is intended to expand this work in hospitals, and steps have been taken towards establishing social casework services for mentally ill patients and for patients who are under the care of the Tuberculosis Division. The possible need for community social work services to ensure suitable social care for patients who do not require hospital care is also being explored. In the meantime, the Senior Social Worker is acting as social work consultant for other officers of the Department where this service is required.

Two recent graduates in social work from the University of Queensland have joined the staff of the State Children Department this year and three others have been appointed to work in hospitals. I am glad to welcome these social workers into this work, and the Department plans to co-operate further with the University by continuing to make available facilities which may be helpful for practical training for social work students.

The Division of Social Work, in close co-operation with the State Children Department, has given priority during the past year to work with families, in an effort to understand and, at the same time, assist with some of the problems which have been responsible over the years for bringing children into the care of the Department. Of particular interest and concern to social workers have been the families who appear to be in danger of breaking down under the severe strain of their social problems. Some parents, facing the stress of unemployment, illness, inadequate accommodation or poor financial circumstances when referred to this Division, were actively considering applying for their children to be cared for in children's institutions.

It has not been possible to offer an extensive family casework service, but where no other social work assistance was available in the community to help these families and where the problem was urgent and children were needing care, a limited number of families was selected for direct casework help. In an endeavour to prevent the families breaking down and children from requiring to be accepted into the care and custody of the State Children Department, assistance was directed towards the basic causes of families' difficulties as well as to relieving immediate distressing situations. It has been our experience that for many families a number of their social problems—unemployment, finance, illhealth—are so inter-related that it is necessary for a social worker who is helping a family to work in close liaison with more than one division of this Department, concentrating on helping the family as a whole rather than helping only one particular patient or member of the family.

Although it has been possible to help only a small number of families in this way, this work is seen as a forerunner to a co-ordinated social work service and it is planned that during the coming year the Senior Social Worker will continue to work in close co-operation with State Children Department, Mental Hygiene Division, Welfare and Guidance Clinics, and other preventive health and welfare services.

As the social work departments in hospitals develop and as other social work services become more established, thus providing for the social needs of a wide group of people, the Division of Social Work seems likely to develop as a co-ordinating and consultation service with a small selected case load and some opportunities for research.

The Senior Social Worker has been engaged in a number of community activities, and has taken particular interest in those concerned with the development of resources related to family welfare. As one of the members appointed to the Child Welfare Legislation Committee by the Minister, she has participated in reviewing child welfare legislation and practice in Queensland. Much of the social work carried out in the Division has been very relevant to research in the child welfare field, and the findings and impressions gathered from this experience have been readily made available to the Committee. At the invitation of the Committee, many interested persons and organisations concerned with the welfare of children have submitted their impressions and suggestions, and the Committee plans to make a comprehensive report on children's services to the Minister.

CASEWORK

An analysis of 147 cases seen in the Division this year is of interest. There were 118 new cases and 29 cases which had been carried forward from the previous year. On the 30th June, 1962, 32 of these cases were currently receiving casework help.

SOURCE OF REFERRAL—

Inter-Departmental	51
Other Government Departments	5
Other Social Agencies	18
Client or Associate direct to Social Worker	34
Other Referrals (including general practitioners, social workers in hospitals, solicitors, etc.)	10

Inter-Departmental referrals which amounted to 43 per cent. of the total referrals included many requests from other officers of the Department for social evaluation where provision of another departmental service, such as assistance with the care of aged persons, was being considered.

Approximately 28 per cent. of the total cases accepted were referred to the Division by clients direct or by their associates. Only those where no other service was available have been included. Many enquiries were re-directed to other appropriate services whenever this was possible.

This group of private referrals included enquiries by relatives and friends who were concerned about families in difficulties or persons in need of medical treatment or care where there appeared to be no way of making help available to them. The problems of the isolated elderly person and the lonely disabled or ill person in the community were noticeable in this group.

SERVICE GIVEN

(1) Casework service related to—	
(*a*) Family and Child Welfare	28
(*b*) Physical or Mental Illness or Disability	27
(*c*) Family Welfare Linked with Illhealth or Disability	24
*(2) (A) Social Evaluation Relating to:—	
(*a*) Mental Illness or Defect	50
(*b*) Physical Illness or Disability	48
(*c*) Care of the Aged	29
(*d*) Family and Child Welfare	80
(*e*) Accommodation	57
(*f*) Employment	40
(*g*) Other (including finance, delinquency, etc.)	29
(B) Social Reports:—	
(*a*) To Department (including other State Government Departments and Hospitals)	84
(*b*) To Other Social Agencies	46
*(3) Referral to Other Division or Agency for Service:—	
(*a*) Family and Child Welfare	46
(*b*) Care of the Aged	20
(*c*) Financial or Material Aid	45
(*d*) Medical or Psychiatric Treatment/ Assessment	38
(*e*) Other Social Casework Service	16
(*f*) Other (including housing, employment, recreational activities, etc.)	33

* It is noted that 45 per cent. of families had more than one inter-related social problem.

CONFERENCES:

The Department was represented by the Senior Social Worker at two conferences during the year. The first, held in Sydney in August, 1961, was the 7th National Conference of the Australian Association of Social Workers when the theme for the conference was "The Association and Social Work." The other, the Second National Conference of the Australian Council of Social Service was also held in Sydney in May, 1962, when the main topic for discussion was "Urban and Rural Community Development." Delegates to both Conferences were widely representative of interested departments and organisations throughout Australia, and discussion proved to be very stimulating and helpful at this stage of the development of social work in Queensland.

FLYING SURGEON SERVICE

Flying Surgeon: C. F. A. CUMMINS, F.R.C.S. (Edin.), F.R.A.C.S.

Anaesthetist: W. W. BIGGS, M.B., B.S. (Q'ld.)

Pilot: CAPTAIN JOHN WHITING

The 1st June, 1962, saw the third completed year of the Flying Surgeon Service.

There has been a slight change in the overall pattern of the Service, brought about by the use of a faster 'plane—a twin-engined Cessna 310 Aircraft—which has a cruising speed of 200 m.p.h., retractable undercarriage and full night-flying facilities.

With this aircraft, there has been less necessity to stay overnight in the smaller centres. This was previously dictated by the range and speed of the single-engined aircraft, and it is now usually possible to return to the base each night, even though this frequently involves night flying. The advantages of this are twofold. Firstly, Longreach is in the geographical centre of the area, and this means that an emergency flight is more easily initiated from here and is, of course, usually a shorter distance. It also avoids the necessity of having to make an emergency 800-mile trip from one end of the territory to the other, which apart from being a lot of flying in one day and quite tiring, can disrupt a routine visit, where perhaps patients, who have come in from many miles away, are waiting to be seen. Secondly, with the team being on call seven days a week, throughout the year, it is far more restful to be able to get home each night, rather than spend it in an indifferent country hotel.

The average "take off" time from Longreach, throughout the year, is 7 a.m. and generally speaking, most of the further centres are 1½ to 2 hours away. This allows a good start to the day. When emergency work occurs, it can usually be sandwiched in before night time. A further advantage of the night-flying facilities is that without declaring a mercy flight, the aircraft can, and frequently does, take off from Longreach at 3 or 4 a.m., in darkness, in order to land at some small town strip at first light, for an emergency.

This changing pattern of work has, of course, increased the number of flying hours, and during the year, 92,508 miles was covered.

However, with this larger aircraft, such an increased distance is a more economic utilisation of its facilities and it has also allowed the Service to take in Quilpie and Collinsville—towns not originally visited.

During the year, regular monthly visits have been paid to the following towns:—

Alpha, Aramac, Barcaldine, Blackall, Clermont, Cloncurry, Collinsville, Emerald, Hughenden, Julia Creek, Mary Kathleen, Mount Isa, Muttaburra, Quilpie, Richmond, Surat, Winton and Roma.

Springsure has been removed from the list of towns visited, because its airstrip is of insufficient length and quality for the present aircraft.

Emergency calls have been fitted into the above routine pattern, with a total of 78 emergency flights made in the year.

A total of 923 patients have been seen in consultation, and 401 routine operations, and 97 emergency operations were performed.

Over the year, there has been a steady improvement in the facilities in western hospitals. Airconditioning of the theatres is proceeding apace and now only a minority have not got this necessity. The provision of modern large adjustable theatre lamps is also proceeding and some rebuilding and improvements of operating facilities have been done or are in process of being done.

It is desired to thank all the practitioners in the west of Queensland for their co-operation in the use of this Service, and to pay a tribute to the general overall high standard of work that is being done in conditions that, during most of the year, are frequently trying.

LEGISLATION

"The Dangerous Substances Regulations of 1961" were published in the *Government Gazette* of 2nd September, 1961. These Regulations came into force as from 1st January, 1962. An Order in Council published in the *Government Gazette* of 2nd September, 1961, declared certain substances to be dangerous substances.

Amendments to "The Dangerous Substances Regulations of 1961" were published in the *Government Gazette* of 27th January, 1962.

"The Dispensary Regulations of 1961" were published in the *Government Gazette* of 16th September, 1961.

ACKNOWLEDGMENTS

I have much pleasure in recording my gratitude to all members of the staff for their loyal service, support, and conscientious attention to duty.

Acknowledgment is also made to the Agent-General for Queensland and his officers for the assistance given me whenever it was asked for, and to other Government Departments for their co-operation, particularly the Government Statistician, who, as usual, has been of great assistance in preparing the vital statistics section of this report and supplied other statistical details from time to time throughout the year.

Members of the Australian Medical Association have again been most co-operative and it is desired to express appreciation for this. I would particularly mention the President, Dr. D. A. Dowling, O.B.E.

I would also thank the members of the various expert committees who have given so freely of their time and advice.

I particularly thank Dr. A. D. D. Pye, General Superintendent of the Brisbane Hospital, and Dr. O. W. Powell, Medical Superintendent of the Princess Alexandra Hospital, for the assistance they have given during the year.

APPENDIX 1

ANNUAL REPORT OF THE NATIONAL MOSQUITO CONTROL COMMITTEE, 1961–1962

The Committee has provided advice on mosquito problems, identification of specimens, assistance to other institutions and individuals engaged in mosquito work, and has continued its programme of research into the systematics, biology and distribution of Queensland mosquitoes.

1. FIELD WORK

Collections were made in the following areas: Camp Mountain, 22nd, 30th September, 15th October; Upper Cedar Creek, Samford, 16th November; Carnarvon Gorge, 26th January-4th February; Toowoomba, 14th-16th March; Lowood, 18th March; Curtis I., 20th-23rd; Blenheim, 20th May; Maroon, 2nd-4th June.

Camp Mountain

Collection and rearing of *Anopheles corethroides* and a new species of *Dixa*.

Upper Cedar Creek

On the visit of Professor L. Brundin, Swedish Museum of Natural History, Stockholm, a world authority on Chironomidae, opportunity was taken to observe his special methods of collecting aquatic Diptera.

Carnarvon Gorge

Dr. Marks, as a member of the University of Queensland Carnarvon Scientific Expedition, collected species of biting Diptera, viz. Culicidae (9), Simuliidae (2), Ceratopogonidae (7), Phlebotominae (1), Tabanidae (4). Collecting methods included a battery-operated New Jersey light-trap. *Culex annulirostris, Anopheles annulipes, Aedes milsoni, Aedes rubrithorax* and *Aedes notoscriptus* were taken biting, but not in pest numbers. The known range of *A. milsoni* was extended by this collection, previous Queensland records being from Stanthorpe to Glasshouse Mountains. The collections suggest that some species with special habitat requirements may have a fairly continuous distribution along the inland parts of the Great Dividing Range between the more coastal sections to the north and south.

Curtis I

Sixteen species of mosquitoes were collected. These included an undescribed species of *Aedes* (*Macleaya*) not previously found south of Townsville, and all stages of *Aedes pseudonormanensis*. The latter species has not previously been collected in coastal localities, and its pupa is undescribed. *Anopheles annulipes, Culex annulirostris* and *Aedes vigilax* were breeding in rock pools on the shore just above high tide-mark; the water, coming from seepages, was practically fresh.

Blenheim, Laidley district

In the very brackish water draining from a large salting *Anopheles annulipes, Anopheles amictus hilli* and *Culex sitiens* were breeding. The latter two species are normally found in brackish water resulting from high tides. *C. sitiens* was breeding here in very large numbers.

Maroon

A new species of *Dixa* was collected.

2. PUBLICATIONS

The following papers were published during the year:—

Marks, E. N., 1961. Faunal Relationships of some Australian and Papuan Culicidae. *Proc. XI. Congr. Ent.*, **1** : 185–187.

Marks, E. N., 1962. Abstract from Past Proceedings. *J. ent. Soc. Qd.* **1** : 49 (Note on the occurrence of *Orthopodomyia andamansis* in Queensland, a new generic record for Australia).

Marks, E. N., 1962. Mosquitoes, Sand Flies and March Flies of the Carnarvon Gorge Area. *Qd. Nat.* **16** : 106–111.

The following paper is in the press:—

Marks, E. N. A Revision of the Subgenus *Chaetocruiomyia* Theobald (Diptera, Culicidae).

3. ACQUISITIONS

A valuable South Pacific mosquito collection representing 55 species and including paratypes of 21 new species, was received from Dr. J. N. Belkin, University of California, who is publishing a monograph on the mosquitoes of the South Pacific, in which work he had been assisted by loan of material from our collection.

Paratypes of new Victorian species and other valuable specimens were received from Dr. N. D. Dobrotworsky.

Paratypes of a new *Aedes* from Chatham Is. were received from Dr. L. J. Dumbleton.

4. IDENTIFICATIONS

Specimens submitted for identification have provided valuable locality and seasonal records and research material. These came from the following:—

Queensland: J. L. Wassell (Port Stewart); D. Huntley (Strathpine); 1 Mobile Malaria Control Unit (Babinda and Atherton districts—includes *Anopheles corethroides* from Atherton, the previous northern most record being Fraser I.); M. Tesch (Texas, Montville); C. Hembrow (Wallumbilla); K. Korboot (Tamborine Mt.); I. C. Yeo (Ballandean); J. Bancroft (Eidsvold); J. T. Brooks (Taringa—4 collections, 425 specimens); Queensland Museum (Proserpine); M. Hawken (Clayfield).

New South Wales: I. M. Mackerras.

Victoria: N. Dobrotworsky, G. Douglas.

Western Australia: E. J. Britten.

New Guinea: Dr. J. J. H. Szent-Ivany; S. H. Christian (4 lots, including new life history material of an undescribed *Aedes*); B. McMillan (2 lots).

In addition many specimens from the Toowong light trap collections have been identified.

5. PUBLIC HEALTH

Collections were received for identification through the Department of Health and Home Affairs from—

Coochie Mudlo

Bauhinia Shire Council

Toowoomba (2)

Warwick

Esk Shire Council

Deagon

Two collections were identified for Brisbane City Council.

The Warwick collection of *Aedes lineatopennis* appears to be the southern most record of this species in Queensland, possibly in Australia.

Toowoomba

At the request of the Toowoomba City Council, and in collaboration with their Chief Health Inspector, Dr. Marks undertook a field investigation in and near Toowoomba, 14-15th March, 1962, the object being to identify and to locate breeding places of sylvan mosquitoes which from time to time occur in Toowoomba. Heavy infestations of *Culex annulirostris* had occurred in the Toowoomba Range area in January and March, 1962, and this field study left little doubt that the main invasion of this species had come with easterly winds. Prolific breeding places, mainly shallow grassy swampy sites of a temporary nature, resulting from the wet season, were found between the foot of the range and Helidon. Adults of *C. annulirostris* were sheltering in great numbers in the dense vegetation on the eastern side of the range, from which they would disperse when conditions were favourable. In all, 13 species were collected, of which 7 were *Aedes* species which breed in temporary rain-filled pools. Collection of *Aedes theobaldi* at Helidon Spa was of interest; this is a common pest species after rain in western Queensland, but is seldom taken in the Moreton district.

Stanthorpe

The Stanthorpe Lions' Club undertook a mosquito survey on 17th March, 1962, and forwarded 20 samples for identification. In these collections, made after heavy rain, *Aedes alboannulatus* was the commonest species.

Wallumbilla

A larval collection submitted from a domestic tank included *Aedes aegypti, Culex fatigans* and *Aedes notoscriptus.*

Port Moresby

A suburban pest species was identified as *Aedes tremulus.*

6. SUMMER MOSQUITO INFESTATION OF BRISBANE

In this, as was noted in previous summers of heavy rainfall (e.g. 1956, 1959), the major pest in the Brisbane district in late summer was *Culex annulirostris,* and numbers of *Aedes vigilax* were comparatively low.

Mr. J. T. Brooks has continued to assist with regular collections at Taringa. In these *Aedes vigilax* first appeared in late August, and there was a heavy infestation on 18th October. It continued to be the commonest, and often the only species collected until early December, and occurred in lesser numbers up to the end of January, after which few specimens were taken. *Culex annulirostris* appeared at the end of November and from 6th December onwards was numerous in collections. *Culex fatigans* was present at times, but more regularly taken in small numbers was *Aedes notoscriptus.*

Miss Joan Bryan, as part of an Honours research project, has operated a New Jersey Light Trap at Toowong during the past twelve months. *Aedes vigilax* was first taken on 16th October, and continued till early January, greatest numbers (about 40 per night) occurring in December. *Culex annulirostris* was common from the end of October until early March, on occasions over 400 per night being taken.

This situation may be contrasted with the previous summer, when a light trap collection at Camp Mountain on 11th March, 1961, included 1337 *Aedes vigilax* and 658 *Culex annulirostris.*

7. SYSTEMATICS

A paper has been prepared on the subgenus *Chaetocruiomyia.* This subgenus of *Aedes* is confined to Au tralia, and was last reviewed in 1932. Early stages, and breeding places were unknown until Mr. J. Wassell discovered larvae of *A. tulliae* at Port Stewart. The larva, pupa and male terminalia of a species the subgenus (*A. tulliae*) are described for the first time, the six previously known species are redescribed, and a new species is described from Western Australia. In all 91 specimens of the subgenus were examined, many being loans from Queensland Museum, Queensland Institute of Medical Research, School of Tropical Medicine, Sydney, C.S.I.R.O. Wild Life Section, C.S.I.R.O. Division of Entomology, Zoology Department University of Melbourne. Other specimens were received by gift from Dr. I. M. Mackerras and Mr. G. W. Douglas. Keys to the species are given and notes on the biology of each species.

A considerable part of the descriptions and figures have been completed for a paper on species of *Ochlerotatus.*

A key has been prepared to female *Aedes* of the subgenera *Ochlerotatus, Aedimorphus* and *Neomelaniconion* of Australia, New Guinea and South Pacific in which 53 species are keyed out. Roneoed copies of this have been sent to specialists for trial and criticism before it is revised for publication.

8. MISCELLANEOUS ACTIVITIES

Specimens have been presented, or loaned for study to Dr. N. V. Dobrotworsky, University of Melbourne, Dr. H. H. Ross, State Natural History Survey, Illinois, and to Queensland Institute of Medical Research. Data on specimens in the collection has been supplied to Dr. B. McMillan and Dr. W. H. Peters.

Large collections on loan from British Museum (Natural History) and Bishop Museum (Honolulu) have been sorted for final checking.

Many slides have been prepared for study, and a commencement made with reorganisation of the cabinet collection to incorporate the many species collected or presented in last two years.

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